**3GPP TSG RAN Meeting #102 RP-23xxxx**

**Edinburgh, Scotland, December 11-15, 2023**

## Status Report to TSG

**Agenda item:** 9.1.2.1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **WI / SI Name** | Further NR Mobility Enhancements | | | | |
| included in this status report | Study Item:  No | Core part:  Yes | Performance part:  Yes | | Testing part:  No |
| **Acronym** | NR\_mob\_enh2 | | | | |
| **Unique ID** | 940098 | | | | |
| **TSG Tdoc of latest approved WI/SI description (if any)** | RP-231475 | | | | |
| **Target Completion Date**  **(indicate if changed)** | Study Item:  N/A | Core part: 12/2023 | Performance part: 06/2024 | Testing part: N/A | |
| **Overall Completion level** | Study Item:  N/A | Core part:  95% | Performance Part:  10% | Testing part: N/A | |

Note: Overall completion level percentage numbers should use one of the colors below:

* xx%: Normal progress, no RAN plenary action needed
* xx%: Progress behind schedule, may need RAN plenary intervention. If so, SR should clearly define requested action
* xx%: Progress critically behind, RAN plenary shall intervene. SR should define requested action

**Source:**

|  |  |  |
| --- | --- | --- |
| **Leading WG** | | RAN WG2 |
| **Rapporteur** | **Name** | Li-Chuan Tseng |
| **Company** | MediaTek Inc. |
| **Email** | li-chuan.tseng@mediatek.com |

## 1 Work plan related evaluation

|  |  |
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| **Do you want to modify the time budget for this WI/SI compared to what was endorsed at the last RAN meeting?** | No |

*If you answered No: Then please remove the Excel file from the zip file of this status report.*

*If you answered Yes: Then please fill out the attached Excel template to request a modification of the time budgets for your WI /SI. The Excel table has to be filled out for all affected RAN WGs and up to the target date of the WI/SI. The basis are the endorsed time budgets of the last RAN meeting. Please highlight all changes of the values.  
 One time unit (TU) corresponds to ~ 2 hours in the meeting.  
 If this status report covers a WI with Core and Performance part, then please have one line for each in the attached Excel table.  
 Note: If no Excel table is attached, then this means no time budget change.*

**Additional explanations/motivations for the time budget changes in the attached Excel table:**

## 2. Detailed progress in RAN WGs since last TSG meeting (for all involved WGs)

NOTE: Agreements and Open issues impacted cross-TSG aspects shall be explicitly highlighted

## 2.1 RAN1

#### 2.1.1 Agreements

**RAN1#114bis (October 2023)**

L1 enhancements for inter-cell beam management

Conclusion

For the necessity of Padding bit in the L1 measurement report for LTM in the case where the report size is less than 12-bits, no enhancements are specified in the spec.

Conclusion

No specific specification change in RAN1 is pursued for scenario 3 for LTM (i.e. Beam indication after cell switch command).

Agreement

For the LTM L1 measurement report,

* + When a UE is configured is configured with SpCellInclusion, the SpCell measurements are the entries in the LTM-CSI-SSB-ResourceSet where the PCI and frequency information [SSB frequency/ARFCN] of the candidate cell is equal to the PCI and frequency information [SSB frequency/ARFCN] of the current SpCell.

Timing advance management to reduce latency

Agreement

Remove the bracket [] and add the following two child IEs into RRC parameters list for LTM to determine the frequency location of PRACH resource for early UL sync procedure:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| # | RAN2 parent IE | Parameter name in the spec | New or existing? | Description | Value Range |
| 1 | ltm-EarlyUlSyncConfig-r18 | EarlyUlSyncConfig-r18 | new | Configuration used by the UE to perform the early UL synchronization procedure. | SEQUENCE {  FrequencyInfoUL  BWP-genericParameters  rach-ConfigGeneric,  ssb-perRACH-Occasion,  prach-RootSequenceIndex  } |
| 2 | EarlyUlSyncConfig-r18 | BWP-genericParameters | new | configure the common parameters of an uplink BWP of candidate cell | BWP |
| 3 | BWP-genericParameters | BWP | Existing | Configure the common parameters of an uplink BWP of candidate cell | SEQUENCE {  locationAndBandwidth,  subcarrierSpacing,  cyclicPrefix  } |

Agreement

Introduce new components of TSSB and ∆RF/BB\_preparation in the time gap between the last symbol of the PDCCH order reception and the first symbol of the PRACH transmission in RAN1 formula according to the RAN4 reply LS [R4-2314454].

* BWP switching related delay (∆BWPSwitching)is not needed or equals to zero for LTM early TA acquisition.
* The corresponding TP is to be discussed in RAN1 #114-bis.

**Friday comment:** RAN1 failed to discuss the TP as stated in the second sub-bullet - therefore such discussion should take place in the next meeting.

Agreement

The bit field codepoint ‘0’ of cell indicator field in PDCCH order indicates PRACH for current serving cell, the rest bit field codepoints are mapped to candidate cells configured with EarlyUlSyncConfig-r18.

* One-to-one mapping between bit field codepoint from 1 to C to candidate cell IDs in an ascending order.

Conclusion

TA acquisition of candidate cell(s) before cell switch command is received in L1/L2 based mobility is supported when the candidate cell(s) is deactivated SCell(s).

**RAN1#115 (November 2023)**

Agreement

* Agree the following RRC parameter for CSI related to LTM CSI report

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| --- | --- | --- | --- | --- | --- |
| # | RAN2 parent IE | Parameter name in the spec | New or existing? | Description | Value Range |
| 1 | reportConfigType | semiPersistentOnPUSCH | new | Describes the properties of semipersistent on PUSCH LTM report | SEQUENCE {  reportSlotConfig-r18  reportSlotOffsetList-r18  reportSlotOffsetListDCI-0-2-r18  reportSlotOffsetListDCI-0-1-r18  p0alpha  }, |
| 2 | reportConfigType | aperiodic | new | Describes the properties of aperiodic LTM report | SEQUENCE {  reportSlotOffsetList-r18  reportSlotOffsetListDCI-0-2-r18  reportSlotOffsetListDCI-0-1-r18  } |
| 3 | semiPersistentOnPUSCH,  aperiodic | reportSlotOffsetList-r18,    reportSlotOffsetListDCI-0-2-r18,  reportSlotOffsetListDCI-0-1-r18 | new | Timing offset Y for semi persistent reporting using PUSCH and for aperiodic reporting | SEQUENCE (SIZE (1.. maxNrofUL-Allocations-r16)) OF INTEGER(0..128) |

Agreement

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| --- | --- | --- | --- | --- | --- |
| # | RAN2 parent IE | Parameter name in the spec | New or existing? | Description | Value Range |
| 1 | EarlyUlSyncConfig-r18 | LTM\_PRACH\_subcarrierSpacing | new | Indicates subcarrier spacing of PRACH for LTM. | ssbSubcarrierSpacing  Only the following values are applicable depending on the used frequency:  FR1: 15 or 30 kHz  FR2-1: 60 or 120 kHz  FR2-2: 120, 480, or 960 kHz |

Agreement

* Agree at least the following RRC parameter for ‘LTM-Candidate-Tci-State’ configuration

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| --- | --- | --- | --- | --- | --- |
| # | RAN2 parent IE | Parameter name in the spec | New or existing? | Description | Value Range |
| 1 | LTM-Candidate-Tci-States -r18 | qcl-Type1,  qcl-Type2, | new | QCL information for the TCI state | LTM-QCL-info-r18 |
| 2 | qcl-Type1,  qcl-Type2, | LTM-QCL-info-r18 | new | QCL type | SEQUENCE {  ReferenceSignal,  qcl-Type,  } |
| 3 | ReferenceSignal | ssb | existing | This field is used to indicate the SS/PBCH index of the SS/PBCH block corresponding to the LTM-TCI-state of the candidate cell. | SSB-index |
| 4 | LTM-QCL-info-r18 | qcl-Type | existing | QCL type as specified in TS 38.214 [19] clause 5.1.5 | ENUMERATED {typeA, typeB, typeC, typeD} |

* Agree at least the following RRC parameter for ‘UL LTM-TCI-State’ configuration

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| --- | --- | --- | --- | --- | --- |
| # | RAN2 parent IE | Parameter name in the spec | New or existing? | Description | Value Range |
| 1 | ltm-ul-TCI-ToAddModList | LTM-Candidate-TCI-UL-State-r18 | new | Indicates the TCI-state information for UL transmission of candidate cell. | SEQUENCE {  LTM-TCI-UL-StateId,  ReferenceSignal,  } |
| 2 | LTM-Candidate-TCI-UL-State-r18 | LTM-TCI-UL-StateId | new | Identify one CandidateTCI-UL-State configuration | INTEGER (0.. -maxNrofCandidateTCI-UL-States) |

Agreement

* Agree the following RRC parameter for ‘Pathloss Reference’ configuration

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| --- | --- | --- | --- | --- | --- |
| # | RAN2 parent IE | Parameter name in the spec | New or existing? | Description | Value Range |
| 1 | LTM-Config-r18 | LTM-Candidate-r18 | new |  | SEQUENCE {  LTM-CandidateId-r18,  LTM-SSB-Config-r18,  LTM-dl-OrJointTCI-StateToAddModList,  LTM-dl-OrJointTCI-StateToReleaseList-r18,  LTM-ul-TCI-ToAddModList,  LTM-ul-TCI-ToReleaseList-r17,  pathlossReferenceRSToAddModList-r18  pathlossReferenceRSToReleaseList-r18  LTM-EarlyUlSyncConfig-r18  candidatePci-r18,  } |
| 2 | LTM-Candidate-r18 | pathlossReferenceRSToAddModList-r18 | new | A list of Reference Signals to be used for path loss estimation for unified TCI state operation. | SEQUENCE (SIZE (1.. maxNrofLtmPathlossReferenceRSs-r18)) OF PathlossReferenceRS-r18 |
| 3 | pathlossReferenceRSToAddModList-r18 | PathlossReferenceRS-r18 | new | To configure a Reference Signal to be used for path loss estimation for PUSCH, PUCCH and SRS for  unified TCI state operation. | SEQUENCE {  pathlossReferenceRS-Id-r18  referenceSignal-r18 CHOICE {  ssb-Index,  [csi-RS-Index],  }  } |
| 4 | PathlossReferenceRS-r18 | ssb-Index | existing | This field is used to indicate the SS/PBCH index of the SS/PBCH block to be used for path loss estimation for PUSCH, PUCCH and SRS | SSB-Index |
| 5 | LTM-Candidate-r18 | pathlossReferenceRSToReleaseList-r18 | new | Indicates a list of one or more pathloss Reference Signals to be released | SEQUENCE (SIZE (1..maxNrofPathlossReferenceRSs-r17)) OF pathlossReferenceRS-Id-r18 |

**Conclusion**

Uplink power control parameters are not pre-configured inside of ‘LTM-Candidate-Tci-States-r18’ IE and ‘LTM-Candidate-TCI-UL-State-r18’ IE.

Agreement

* Agree the following RRC parameter for ‘Pathloss Reference’ configuration

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| --- | --- | --- | --- | --- | --- |
| # | RAN2 parent IE | Parameter name in the spec | New or existing? | Description | Value Range |
| 1 | ltm-dl-OrJointTCI-StateToAddModList | LTM-Candidate-Tci-States -r18 | new | associates one or two DL reference signals with a corresponding quasi-colocation (QCL) type | SEQUENCE {  LTM-tci-StateId,  qcl-Type1,  qcl-Type2,  pathlossReferenceRS-Id-r18  } |
| 2 | ltm-ul-TCI-ToAddModList | LTM-Candidate-TCI-UL-State-r18 | new | Indicates the TCI-state information for UL transmission of candidate cell. | SEQUENCE {  LTM-tci-UL-StateId,  refereneSignal-r18,  pathlossReferenceRS-Id-r18  } |

Agreement

* Agree the following RRC parameter for TRS configuration

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| --- | --- | --- | --- | --- | --- |
| # | RAN2 parent IE | Parameter name in the spec | New or existing? | Description | Value Range |
| 1 | LTM-Config-r18 | LTM-Candidate-r18 | new | This field contains necessary information for the UE for procedures about an LTM candidate cell to be executed before an LTM cell switch | LTM-CandidateId-r18,  LTM-SSB-Config-r18,  LTM-dl-OrJointTCI-StateToAddModList,  LTM-dl-OrJointTCI-StateToReleaseList-r18,  LTM-ul-TCI-ToAddModList,  LTM-ul-TCI-ToReleaseList-r17,  LTM-nzp-CSI-RS-ResourceToAddModList,  LTM-nzp-CSI-RS-ResourceToReleaseList,  LTM-nzp-CSI-RS-ResourceSetToAddModList,  LTM-nzp-CSI-RS-ResourceSetToReleaseList,  …..  } |
| 2 | LTM-Candidate-r18 | LTM-nzp-CSI-RS-ResourceToAddModList | new | Defines a list of LTM-nzp-CSI-RS-Resources | SEQUENCE (SIZE (1..maxNrofLtmNZP-CSI-RS-Resources)) OF LTM-NZP-CSI-RS-Resource |
| 3 | LTM-Candidate-r18 | LTM-nzp-CSI-RS-ResourceToReleaseList | new | List of LTM-nzp-CSI-RS-Resource to be released | SEQUENCE (SIZE (1..maxNrofNZP-CSI-RS-Resources)) OF LTM-NZP-CSI-RS-ResourceId |
| 4 | LTM-nzp-CSI-RS-ResourceToAddModList | LTM-NZP-CSI-RS-Resource | new | Configure Non-Zero-Power (NZP) CSI-RS transmitted in the cell | SEQUENCE {  LTM-nzp-CSI-ResourceId,  resourceMapping,  powerControlOffsetSS,  scramblingID,  periodicityAndOffset,  qcl-InfoPeriodicCSI-RS,  subcarrierSpacing,  absoluteFrequencyPointA,  } |
| 5 | LTM-NZP-CSI-RS-Resource | LTM-nzp-CSI-ResourceId | new | Identify one LTM-NZP-CSI-RS-Resource | INTEGER (0..maxNrofLtmNZP-CSI-RS-Resources-1) |
| 6 | LTM-NZP-CSI-RS-Resource | resourceMapping | Existing | OFDM symbol location(s) in a slot and subcarrier occupancy in a PRB of the CSI-RS resource. | CSI-RS-ResourceMapping |
| 7 | LTM-NZP-CSI-RS-Resource | powerControlOffsetSS | Existing | Power offset of NZP CSI-RS RE to SSS RE | ENUMERATED{db-3, db0, db3, db6} |
| 8 | LTM-NZP-CSI-RS-Resource | scramblingID | Existing | Scrambling ID (see TS 38.214 [19], clause 5.2.2.3.1). | ScramblingId |
| 9 | LTM-NZP-CSI-RS-Resource | periodicityAndOffset | Existing | Periodicity and slot offset of CSI-RS Resource. | CSI-ResourcePeriodicityAndOffset |
| 10 | LTM-NZP-CSI-RS-Resource | qcl-InfoPeriodicCSI-RS | new | For a target periodic CSI-RS, contains a reference to one TCI-State in TCI-States for providing the QCL source and QCL type | LTM-tci-StateId |
| 11 | LTM-NZP-CSI-RS-Resource | subcarrierSpacing | Existing | Subcarrier spacing of CSI-RS. | ENUMERATED {kHz15, kHz30, kHz60, kHz120, kHz240, kHz480-v1700, kHz960-v1700, spare1} |
| 12 | LTM-NZP-CSI-RS-Resource | absoluteFrequencyPointA, | Existing | This field indicates the absolute frequency position of the reference resource block (Common RB 0). | ARFCN-ValueNR |
| 13 | LTM-Candidate-r18 | LTM-nzp-CSI-RS-ResourceSetToAddModList | new | defines a list of LTM-nzp-CSI-RS-ResourceSets | SEQUENCE (SIZE (1..maxNrofLtmNZP-CSI-RS-ResourceSets)) OF LTM-NZP-CSI-RS-ResourceSet |
| 14 | LTM-Candidate-r18 | LTM-nzp-CSI-RS-ResourceSetToReleaseList | New | List of LTM-nzp-CSI-RS-ResourceSet to be released | SEQUENCE (SIZE (1..maxNrofLtmNZP-CSI-RS-ResourceSets)) OF NZP-CSI-RS-ResourceSetId |
| 15 | LTM-nzp-CSI-RS-ResourceSetToAddModList | LTM-NZP-CSI-RS-ResourceSet | new | Provide a set of LTM-Non-Zero-Power (NZP) CSI-RS resources for LTM operatio | SEQUENCE {  LTM-nzp-CSI-ResourceSetId,  LTM-nzp-CSI-RS-Resources,  trs-Info,  resourceType-18,  } |
| 16 | LTM-NZP-CSI-RS-ResourceSet | resourceType-18 | Existing | Time domain behavior of resource configuration (see TS 38.214 [19], clause 5.2.1.2). | ENUMERATED {periodic } |
| 17 | LTM-NZP-CSI-RS-ResourceSet | LTM-nzp-CSI-ResourceSetId | new | used to identify one LTM-NZP-CSI-RS-ResourceSet. | INTEGER (0..maxNrofLtmNZP-CSI-RS-ResourceSets-1) |
| 18 | LTM-NZP-CSI-RS-ResourceSet | LTM-nzp-CSI-RS-Resources | new | NZP-CSI-RS-Resources associated with this NZP-CSI-RS resource set | SEQUENCE (SIZE (1..maxNrofLtmNZP-CSI-RS-ResourcesPerSet)) OF LTM-nzp-CSI-ResourceId |
| 19 | LTM-NZP-CSI-RS-ResourceSet | trs-info | Existing | Indicates that the antenna port for all NZP-CSI-RS resources in the CSI-RS resource set is same | ENUMERATED {true} |
| 20 | LTM-QCL-info-r18 | ReferenceSignal | new | Reference signal with which quasi-collocation information is provided | CHOICE{  NZP-CSI-RS-ResourceId,  ssb  } |
| 21 | ReferenceSignal | NZP-CSI-RS-ResourceId | new | Provide one NZP-CSI-RS-Resource. | INTEGER (0..maxNrofLtmNZP-CSI-RS-Resources-1) |

* FFS on the following IE:

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| --- | --- | --- | --- | --- | --- |
| 22 | LTM-NZP-CSI-RS-Resource | powerControlOffset | Existing | Power offset of PDSCH RE to NZP CSI-RS RE | INTEGER (-8..15) |

Agreement

Add the following RRC parameter for ‘LTM-Candidate-Tci-State’ configuration:

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| --- | --- | --- | --- | --- | --- |
| # | RAN2 parent IE | Parameter name in the spec | New or existing? | Description | Value Range |
| 1 | LTM-nzp-CSI-RS-ResourceToAddModList | LTM-NZP-CSI-RS-Resource | new | Configure Non-Zero-Power (NZP) CSI-RS transmitted in the cell | SEQUENCE {  LTM-nzp-CSI-ResourceId,  resourceMapping,  powerControlOffsetSS,  scramblingID,  periodicityAndOffset,  qcl-InfoPeriodicCSI-RS,  subcarrierSpacing,  absoluteFrequencyPointA,  cyclicPrefix,  } |
| 2 | LTM-NZP-CSI-RS-Resource | cyclicPrefix | existing | Indicates whether to use the extended cyclic prefix for this LTM NZP-CSI-RS resource. If not set, the UE uses the normal cyclic prefix. | ENUMERATED { extended } |

L1 enhancements for inter-cell beam management

Agreement

The draft LS reply in R1-2312442 is endorsed (with fixing the dates of the next meetings). Final LS is agreed in R1-2312443.

Agreement

UE may expect that:

* For a candidate cell, the configuration of an LTM TCI state in ltm-DL-OrJointTCI-StateToAddModList-r18 and ltm-ul-TCI-ToAddModList-r18 is same as its counterpart in dl-OrJointTCI-StateList-r17 and ul-TCI-ToAddModList-r17 of the first active BWP in ServingCellConfig, at least in terms of TCI state ID, the corresponding qcl-Type1 and qcl-Type2 for the DL or joint TCI state or referenceSignal for the UL TCI state.
* The LTM TCI state(s) in ltm-DL-OrJointTCI-StateToAddModList-r18 and ltm-ul-TCI-ToAddModList-r18 of a candidate cell is a subset of serving cell TCI state(s) in dl-OrJointTCI-StateList-r17 and ul-TCI-ToAddModList-r17 of the same cell.

Agreement

Send an LS to RAN2 to inform the issue on MAC CE to activate/deactivate semi-persistent PUCCH report

* With an independent configuration of LTM CSI reporting which RAN2 has agreed, it is not clear how the activation/deactivation of semi-persistent PUCCH report for LTM CSI reporting can be supported.
* RAN2 is respectfully asked to take this issue into account.

Agreement

The draft LS in R1-2312547 is endorsed with the following revision:

With an independent configuration of LTM CSI reporting which RAN2 has agreed, the legacy MAC CE command cannot be used for LTM semi-persistent reporting on PUCCH because the MAC CE is used for the legacy CSI report configuration. It is not clear how the activation/deactivation of semi-persistent PUCCH report for LTM CSI reporting can be supported

Final LS is agreed in R1-2312642.

Agreement

The TCI states in the candidate Cell TCI activation/deactivation command is associated with LTM TCI state pool of the target cell, i.e. configured under LTM-Candidate-r18.

**Conclusion**

No consensus to include *simultaneousU-TCI-UpdateList* under *LTM-Candidate-r18* to activate and indicate TCI states for SCell(s) after cell switch command.

**Conclusion**

When RACH-less LTM is performed, for beam indication of target cell based on Rel-17 unified TCI framework applied to CORESET#0 and CORESETs (other than CORESET#0) associated with CSS sets other than Type3-PDCCH CSS sets where followUnifiedTCI-state is not enabled or not provided, whether using the TCI state indicated in the Cell Switch Command is up to UE implementation.

Agreement

* Processing of an LTM CSI report occupies 1 CPU
* CR to 38.214 is as follows

5.2.1.6 CSI processing criteria

The UE indicates the number of supported simultaneous CSI calculations with parameter *simultaneousCSI-ReportsPerCC* in a component carrier, and *simultaneousCSI-ReportsAllCC* across all component carriers. If a UE supports simultaneous CSI calculations it is said to have CSI processing units for processing CSI reports. If *L* CPUs are occupied for calculation of CSI reports in a given OFDM symbol, the UE has unoccupied CPUs. If *N* CSI reports start occupying their respective CPUs on the same OFDM symbol on which CPUs are unoccupied, where each CSI report corresponds to , the UE is not required to update the requested CSI reports with lowest priority (according to Clause 5.2.5), where is the largest value such that holds.

A UE is not expected to be configured with an aperiodic CSI trigger state containing more than Reporting Settings. Processing of a CSI report occupies a number of CPUs for a number of symbols as follows:

- for a CSI report with CSI-ReportConfig with higher layer parameter *reportQuantity* set to 'none' and *CSI-RS-ResourceSet* with higher layer parameter *trs-Info* configured

- for a CSI report with *LTM-CSI-ReportConfig* or a CSI report with *CSI-ReportConfig* with higher layer parameter *reportQuantity* set to 'cri-RSRP', 'ssb-Index-RSRP', 'cri-SINR', 'ssb-Index-SINR', 'cri-RSRP- Index', 'ssb-Index-RSRP- Index', 'cri-SINR- Index', 'ssb-Index-SINR- Index ' or 'none' (and *CSI-RS-ResourceSet* with higher layer parameter *trs-Info* not configured)

Agreement

The TCI state indicated in the cell switch command is associated with LTM TCI state pool of the target cell, i.e. configured under LTM-Candidate-r18.

Agreement

For the priority rule for CSI report, LTM CSI report is prioritized over legacy CSI report.

**Conclusion**

Accumulation of PUSCH/PUCCH/SRS closed loop power control for indicated target cell has been reset when the cell switch command takes effect

Note: Necessity of the CR needs further discussion: come back in the future meeting if the necessity is identified.

**Conclusion**

The following proposal is not pursued in Rel-18

* A MAC CE is introduced to activate/deactivate the SSB(s)/cell(s) configured in the L1 measurement report

Agreement

After RACH procedure until a new TCI state is indicated by the target cell, a UE follows the indicated TCI-state in the cell switch command at least for CFRA triggered by cell switch command.

Timing advance management to reduce latency

Agreement

Use clause 8.1 of 213 as the reference clause for the value of N used to determine the overlap scenario between the PRACH transmission to a candidate cell and an UL transmission to the serving cell.

Agreement

n-TimingAdvanceOffset is pre-configured to UE for each candidate cell.

Agreement

Endorse in principle the TP below

**Reason for change:** specify the condition of performing UE-based TA estimation

**Summary for change:** the configuration of each candidate cell includes a field ltm-UE-MeasuredTA-ID. If the value of ltm-UE-MeasuredTA-ID for the serving cell is the same as the value of ltm-UE-MeasuredTA-ID for the candidate, the UE would perform UE-based TA estimation. If the value of ltm-UE-MeasuredTA-ID for the serving cell is different from the value of ltm-UE-MeasuredTA-ID for the candidate, the UE would *not* perform UE-based TA estimation.

**Consequences if not approved:** condition of performing UE-based TA estimation is not clear

|  |
| --- |
| **38.213 21 L1/L2-triggered Mobility Procedure**  A UE can be indicated, by *LTM-Config*, candidate cells and SS/PBCH blocks per candidate cell for the UE to obtain synchronization and measure corresponding L1-RSRPs [10, TS 38.133]. A MAC CE command can activate TCI states, provided by *LTM-Candidate-TCI-State-r18* or/and *LTM-Candidate-TCI-UL-State-r18*, associated with SS/PBCH blocks or TRS of corresponding candidate cells. The UE is provided configurations by *LTM-CSI-ReportConfigToAddModList* for reporting L1-RSRP measurements [6, TS 38.214] that include a number of candidate cells and a number of SS/PBCH blocks per candidate cell from the number of candidate cells.  If the *ltm-UE-MeasuredTA-ID (if configured)* of a candidate cell is equal to the *ltm-UE-MeasuredTA-ID (if configured)* of the serving cell, the UE estimates based on the UE implementation a timing advance to apply from a first transmission on a candidate cell that is after the reception of a cell switch command for the candidate cell [11, TS 38.321].  A UE can be provided configurations, by *EarlyUlSyncConfig*, for PRACH transmission parameters for each of the candidate cells. The UE can be triggered a PRACH transmission on a candidate cell by a PDCCH order that the UE receives on a serving cell and includes an indication of the candidate cell for the PRACH transmission [4, TS 38.212]. If the serving cell and the candidate cell operate in a same frequency range and the UE would have transmissions that overlap in time, or when a gap between a first or last symbol of a PRACH transmission to the candidate cell is less than 𝑁 symbols from a last or first symbol, respectively, of an UL transmission to the serving cell, where is defined in Clause TBD, the UE  - drops the transmissions on the serving cell when the UE does not support transmissions that overlap in time or are separated by less than the gap on the serving cell and the candidate cell  - prioritizes power allocation to the PRACH transmission on the candidate cell in clause 7.5 when the UE supports transmissions that overlap in time or are separated by less than the gap, and a total UE transmit power in the frequency range would exceed  The UE transmits the PRACH on the candidate cell as described in Clause 8.1 with a power determined as described in Clause 7.4.  A UE can be provided by a MAC CE in a PDSCH reception on the serving cell [11, TS 38.321] a *TCI-State* and/or *TCI-UL-State* in *LTM-dl-OrJointTCI-StateToAddModList* and/or *LTM-ul-TCI-ToAddModList* indicating a unified TCI state [6, TS 38.214] for applicable receptions or transmissions on a candidate cell from the number of candidate cells. The UE applies the *TCI-State* and/or *TCI-UL-State,* if indicated by the MAC CE, from a first slot that is after the last symbol of a PUCCH or PUSCH with HARQ-ACK information for the PDSCH providing the MAC CE, and is the SCS configuration for the TBD*.* |

Agreement

The TP below is endorsed for TS 38.213

**Reason for change:** RACH based TA acquisition mechanism for candidate cells does not include UE receiving RAR corresponding to the PRACH transmission, however, such characteristic has not been captured in clause 8.2 TS 38.213. In other words, from perspective of RAN1 specification, UE still needs to detect PDCCH for RAR for a PRACH transmission towards a candidate cell. Hence, we suggest to capture the following text proposal for clarification.

**Summary of change:** To specify that UE does not detect PDCCH RAR for a PRACH transmission triggered for a candidate cell.

**Consequence if not approved:** RACH procedure without RAR for candidate cells is not supported from perspective of RAN1 specification.

|  |  |
| --- | --- |
| **Text Proposal to section 8.2, TS 38.213-i00.**   |  | | --- | | 8.2 Random access response - Type-1 random access procedure  In response to a PRACH transmission, a UE attempts to detect a DCI format 1\_0 with CRC scrambled by a corresponding RA-RNTI during a window controlled by higher layers [11, TS 38.321]. If a PRACH transmission is triggered by PDCCH order with non-zero Cell Indicator Field, the UE does not attempt to detect a DCI format 1\_0 with CRC scrambled by a corresponding RA-RNTI. The window starts at the first symbol of the earliest CORESET the UE is configured to receive PDCCH for Type1-PDCCH CSS set, as defined in clause 10.1, that is at least one symbol, after the last symbol of the last PRACH occasion corresponding to the PRACH transmission, where the symbol duration corresponds to the SCS for Type1-PDCCH CSS set as defined in clause 10.1. Ifor, as defined in [4, TS 38.211], is not zero, the window starts after an additional msec where is defined in [4, TS 38.211] and is provided by *kmac* or if *kmac* is not provided. The length of the window in number of slots, based on the SCS for Type1-PDCCH CSS set, is provided by *ra-ResponseWindow*.  <Unchanged parts are omitted> | |

**Conclusion**

From RAN1 perspective, for a LTM candidate cell, PRACH for early TA acquisition can be performed on either UL or SUL in the LTM candidate cell.

* Whether to have only one RACH configuration or two RACH configurations is left to RAN2 decision.

#### 2.1.2 Remaining Open issues

RAN1 has concluded their works. Any issues found are being handled in RAN1 maintenance phase.

## 2.2 RAN2

#### 2.2.1 Agreements

**RAN2#123bis (October 2023)**

Organizational Stage-2 and UE caps

R2-2309830 37.340 running CR for introduction of NR further mobility enhancements ZTE Corporation, Sanechips draftCR Rel-18 37.340 17.6.0 B NR\_Mob\_enh2-Core

* Endorsed (as starting point for this meeting)

R2-2311330 Summary of [AT123bis][511][feMob] Stage-2 TP for Early Synchronization MediaTek Inc.

* P1: The description for early DL synchronization doesn’t need to be captured in a separate section, and that a descriptive text is sufficient.
* P2: Early UL synchronization is described without flowchart in the general description of LTM instead of an independent new section.
* P3: Maintain/update the time chart in the running CR and keep the time chart in the specification.
* Update the TP to remove overlap with R4 (acc to current status). Shall in any case not have overlap in the final CR to TSG RAN

R2-2311000 UE capability for LTM and leftover stage 2 issues Huawei, HiSilicon

* Confirm that deactivated SCell as LTM candidate cell is supported
* Intention: The mechanism for early UL/DL synchronization of candidate target cells should be designed in a common manner for both PCell and SCell switch (to achieve the target of reduced cell switch delay in CA case).

L1/L2-based inter-cell mobility

R2-2310885 RRC running CR for LTM Ericsson draftCR Rel-18 38.331 17.6.0 B

* We attempt merge at next meeting, endorse first.
* Expect to endorse RRC CR in a post email disc.
* It is assumed that L3 handover may happen while LTM is configured / evaluated / used.
* P4: RAN2 confirms that during network triggered L3 HO / PSCell change, the UE does not autonomously release the LTM configuration.
* P5: RAN2 confirms that the RRCReconfiguration message to execute an L3 HO or PSCell change procedure may reconfigure (setup, release) the LTM configuration.
* For the model of CSI report configuration, RAN2 to implement Option 2 (as in current RRC running CR).
* For the model of RS configuration, RAN2 to follow what indicated by RAN1 in the parameter list.
* The LTM CSI resource configuration is generated by the CU. Send an LS to RAN3 (include in LS below)
* The list of LTM CSI resource configuration is common for all the LTM candidate cells (as in current RRC running CR).
* RAN2 assumes that network can include the field spCellInclusion only if the SpCell is an LTM candidate cell.
* We send an LS to RAN1.
* With the corrections above the LS is approved in R2-2311333
* No particular solution needed for TA timer handling, this is expected to be handled by the network.
* For RRC aspects of early RACH and TCI state handling, wait for R1
* Ask about SMTC (include in R1 LS)
* Proposal 2a: For each candidate target cell towards which early RACH is supported, the UE is provided with a RACH configuration (per source per cand), which can be the same for multiple source cells.
* Proposal 2b: RAN2 understands that the source DU needs to know the early RACH configuration for each candidate cell, so that source cell can know how to set the PDCCH order information for early RACH.
* Proposal 2c: The candidate DU provides the TA value and its associated information to the source DU via the CU, e.g. preamble index, RO information (i.e. RA-RNTI) and candidate cell identity, so that the source DU can identify the UE. RAN3 can design the necessary network signalling.
* Send LS to R3
* LS out is approved in R2-2311332

RRC

* Combination of Ref + Cand configuration will use legacy delta config procedure (simplification of current Running CR), where the UE considers the Ref config as current config and applies the candidate config using legacy delta configuration procedure.
* Will be specified as if it is done in real time, but with R2 understanding that UE implementation is allowed to pre-generate configurations.
* R2 assumes that SCG LTM with deactivated src SCG will not happen (no TS impact)
* For SCG configured LTM in NR-DC scenario, LTM recovery for SCG is not supported.
* For SCG configured LTM in NR-DC scenario, in the case of RLF on PSCell / SCG LTM execution failure / PSCell change failure, UE shall

- If the MCG transmission is not suspend, SCG failure information procedure will be triggered;

- Otherwise, RRC re-establishment will be executed.

* UE only releases SCG configuration at MCG LTM execution if configured by the network (revert prior agreement). No intention to optimize further bearer handling for this case.
* UE need to send an UL transmission for procedure competion also for SCG case. If SRB3 is not configured, FFS exactly if / what modification to 3GPP TS is needed.
* Updates reviewed together with capture of meeting agreements in post email disc
* If UE is configured by RRC to perform UE based TA measurement, UE applies the measured TA value and performs RACH-less LTM, upon LTM cell switch. (assume similar config as for L2 reset)
* Observation: No or small specification impact/restriction is expected on the UE to use both DG and CG for RACH-less LTM.
* For RACH-less LTM, the UE determines successful reception of its first UL data based on receiving a PDCCH addressing the UE’s C-RNTI in the target cell scheduling a new transmission as first UL transmission. Can be either DL assignment or UL grant addressed to same HARQ process for the “new transmission”
* P9: As to the CFRA resource related information in LTM MAC CE, it is the information similar to those in the legacy PDCCH order triggered RACH, including preamble index, UL/SUL indicator, SSB index, PRACH Mask index (FFS which config is referring to), and FFS on the Msg1 repetition number, and FFS additional info,
* P11: As for providing the TA for “same TA value as source” case, RAN2 agree Option 1 is baseline without further impact. Option 1: Implicit way by directly providing the TA value; Can add additional option if needed.
* P4: RAN2 to define the UE behaviour on the R18 CG for RACH-less LTM, if it is not released by NW after LTM completion:

Option 1: UE stops using those CG (FFS on the spec impact/wording details);

* P5: No need to support “UE considers RACH-less LTM failure, if the *configuredGrantTimer* expires before LTM completion/T304 expiry.”
* P13: In RACH-less LTM, TCI state field should be provided in the LTM cell switch MAC CE, i.e. UE uses the beam indicated by the NW in RACH-less LTM.
* Proposal 8a: In RACH-less LTM, the MAC reset operation is performed before applying the TA value of target cell.
* P8b: LTM MAC reset is triggered by RRC layer (in Reconfiguration with sync procedure) and MAC layer applies the TA value only after MAC reset operation.
* P15: MAC layer does not indicate RRC layer to trigger/skip RACH upon receiving the LTM cell switch command MAC CE. *(to close one EN in MAC running CR)*

Subsequent CPAC

R2-2309831 Summary of [Post123][054][feMob] Discussion on stage-2 signalling open issues ZTE Corporation, Sanechips

Proposals marked easy agreement are agreed, except P7:

* P1a: Upon SCG release, RAN2 confirms that the UE shall release the subsequent CPAC configuration within SCG VarConditionalReconfig autonomously.
* P1b: Upon SCG release, it’s up to the NW decision to maintain or release the subsequent CPAC configuration within MCG VarConditionalReconfig.
* P2: Upon intra-MN PCell change, it’s up to the NW decision to maintain/modify/release the subsequent CPAC configuration.
* P3: If there are maintained subsequent CPAC configurations with CPA execution conditions after SCG release, the maintained configurations can be used for the subsequent CPA execution.
* P4: The coexistence of subsequent CPAC and SCG deactivation is not supported in Rel-18, i.e. follow the same principle as legacy CPAC.
* P5: The candidate and reference configuration for subsequent CPAC can include both MCG and SCG part configurations. It can be up to the NW implementation whether to include the MCG part.
* P6: The MN generates the MCG part of the reference configuration (if any), while the SN (source or candidate) generates the SCG part of the reference configuration.
* P8: The MN is responsible for the reference configuration generation for MN/SN initiated inter-SN SCPAC.
* P10: The MN can request an SCG reference configuration from any of the involved SNs.
* P11: Candidate SN prepares the execution conditions for subsequent CPC when the candidate SN prepares the candidate SCG configuration(s) for candidate PSCell(s).
* P12: For SN initiated inter-SN subsequent CPAC, in SN Change Required message, the source SN includes the following information to the MN:  
  - A list of candidate SNs (can also include source SN) for the initial and subsequent CPC, and for each candidate SN in the list, a list of PSCells suggested to be prepared by the candidate SN.  
  - Execution conditions associated with each suggested PSCell of the initial CPC.
* P14: In SN Addition Request Acknowledge message, the candidate SN includes the following information to the MN:

1) List of prepared candidate PSCells and associated candidate SCG configurations, which include the candidate SCG measurement configurations, i.e. as legacy;

2) For each cell in 1), a list of proposed candidate PSCells for the subsequent CPC (e.g., the neighbour PSCells), and associated execution conditions (events A3/A5, based on the candidate SCG measurement configurations).

Note: The proposed candidate PSCells are selected from the recommended cell list provided by the MN, as the legacy.

* P15: The MN checks whether the proposed candidate PSCells for subsequent CPC have been prepared by other candidate SNs, and the MN may initiate an SN Modification procedure to the candidate SN, e.g. when not all proposed candidate PSCells for subsequent CPC have been prepared.
* P16a: In SN Modification Request message, the MN includes the following information to the candidate SN:

Candidate PSCells for subsequent CPC that have been prepared by other candidate SNs.

* P16b: In SN Modification Request Acknowledge message, the candidate SN includes the following information to the MN:

Updated candidate SCG configurations and/or the execution conditions for subsequent CPC, if needed. The detailed signaling is similar to that in SN Addition Request Acknowledge message.

* P17: RAN2 assumes that the coexistence of subsequent CPAC and legacy CPAC is supported. [Check with RAN3]
* P18: RAN2 assumes that the existing signalling flow charts and procedural texts for Rel-17 CPA/CPC procedures can be reused for subsequent CPAC procedure with some modifications. [Check with RAN3]
* For one UE, for CPC only either MN format or SN format (only intra-SN case is possible) is used
* MN format is supported for intra-SN (in addition to SN format)

13a, 13b agreed as starting point. Can discuss further in the CR work

* P13a: For MN initiated inter-SN subsequent CPAC, in SN Addition Request message, the MN includes the following information to each candidate SN:

- A list of candidate SNs, and for each candidate SN in the list, a list of cells recommended by MN (assume format as legacy)

* P13b: For SN initiated inter-SN subsequent CPAC, in SN Addition Request message, the MN includes the following information to each candidate SN:

A list of candidate SNs, and for each candidate SN in the list, a list of PSCells suggested to be prepared by the candidate SN.

* Postpone 13c
* Rel-18 Conditional-Reconfiguration Information element may include

- List of Group-ID (mapping to SN) and associated SK-counter values outside the candidate conditional configurations.

- The Group-ID parameter is included within each candidate conditional configuration(CondConfigAddMod) marked for subsequent CPAC.

* Mod P3: UE include the selected SK-counter value in the MN RRC Reconfiguration Complete message when UE selects new SK-counter value as part of S-CPAC execution.
* Mod P4: For Pcell-change /PSCell-change /SCG Release scenarios, if the SCPAC configuration is maintained, UE also maintains the unused SK-counter values.
* RAN2 Understanding: The NW configuration ensures that The SK-counter lists assigned for SCPAC configurations and the SK-counter value assigned for CPAC configurations are uniquely different. No specification changes are needed in this regard.
* No specification changes needed for UE behaviour for the Scenario where free SK-Counter not available at the time of execution. This scenario can be avoided by NW configuration.
* Send Reply LS to SA3 (can add additional context info in the LS if deemed needed for understanding the intentions)

CHO including target MCG and candidate SCGs for CPC CPA in NR-DC

* P2: The execution of CHO with candidate SCG is prioritized, if both PCell for CHO only or CHO including target MCG and target SCG, and the PCell and the associated PSCell for CHO with candidate SCG(s) is triggered.
* P4: R2 assumes that the maximum number of conditional reconfigurations maxNrofCondCells (i.e., including the coexistence CHO with candidate SCGs, CHO only, CHO with target SCG, CPA/CPC if present) is 8 in Rel-18. FFS whether any optional additional UE cap for higher number is needed.
* P1a: If at least the legacy CPA or CPC was configured, UE removes CHO with candidate SCG configurations when PSCell changes,same as the legacy in the current spec.
* P1b: If the legacy CPA or CPC was not configured, UE does not have to remove the configuration for CHO with candidate SCG(s) autonomously when PSCell changes (i.e. UE just wait and follow the NW signaling).
* P5: The legacy condEventA4 related parameters are provided by the candidate MN to the source MN for the execution condition for candidate PSCell, at least including(FFS more parameters are needed, FFS the parameters are in inter-node message or Xn message),

- a4-Threshold

- hysteresis (optional)

- timeToTrigger (optional)

- rsType (optional)

* P6: For the preparation of the R18 CHO with candidate SCG(s), it is up to RAN3 on the signaling details between S-MN and T-MN. The related RN in the running CR can be removed.
* P3: The configuration for CHO with candidate SCG(s) is not considered for CHO recovery.

Other

* R2 expect to reuse legacy EMR to great extent
* Long email disc to next meeting, identifying R2 impact and attempting RRC Draft CR (Nokia)

**RAN2#124 (October 2023)**

Organizational Stage-2 and UE caps

R2-2312236 Stage-2 TP for SCG LTM procedure ZTE Corporation, Sanechips

* P1: RAN2 to introduce separate flow charts and procedural texts for SCG LTM procedure in TS 37.340, i.e. including both cases when SRB3 is used and when SRB3 is not used.
* P2: RAN2 to approve the TP for SCG LTM procedure in the Annex. (can be further enhanced in CR disc)

R2-2312235 37.340 running CR for introduction of NR further mobility enhancements ZTE Corporation,

* Endorsed (but need update to reflect agreements)

R2-2312986 Open issues and resolution proposals on the RRC merging issues Ericsson

* P2 P3 P4 P5 P6 discussed separately
* P1 P7 agreed

R2-2312985 Introduction of further NR mobility enhancements Ericsson, OPPO, CATT CR

* Endorsed (with the comments and status above) as starting point for this meeting.

R2-2312987 RRC open issues list Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

* Can address remaining OI if any in CR email disc

R2-2313590 Discussion and TP on L2/3 UE capabilities for NR further mobility enhancements Intel Corporation

* Assume support for RACH-less Is optional (follow R1 feature list)
* P7 already agreed, other parts seem agreeable (can discuss in email discussion)

[R2-2312152](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2312152.zip) 38.331 running draftCR for introduction of NR further mobility enhancements Intel Corporation

* Included in the long email discussion for further consideration, not for TSG RAN at this point in time.
* Long email discussion, UE caps (based on input to this meeting, and can include new input)

L1/L2 based inter-cell mobility

* LTM completed from R2 perspective
* Key Stream reuse at LTM recovery seems to be an issue (at least a principal issue from req point of view)
* Assume that we stick with the agreement to support Fast LTM recovery, and attempt to resolve this issue (or investigate whether it could be tolerated).
* UE keeps the LTM configuration as result of the LTM recovery
* s-Measure does not apply to L1 LTM related measurements (in this release)
* Assume that the RRCResume message does not need to setup LTM-related configurations (could be revisited during maintenance if justified)
* The UE performs TA measurements for candidate cell(s) after configured by RRC
* R2 assumes that the exact time the UE performs TA measurement is up to UE impl (no need to specify in R2 TS)
* No change to current t304 assumptions (no CB in this release expected)
* For each LTM candidate configuration, RRC provides a single early RACH configuration to the UE, as in the current RRC CR (inform R3, HW).

R2-2313955

* LS out is approved (this is the final version)
* Use common range for candidate identifiers across RRC/MAC CRs and in RAN1/RAN3 parameters, Specifically Update in MAC CR that UE applies candidate configuration with identifier as Target Configuration ID +1 during cell switch.
* Confirm that UE may receive mrdc-SecondaryCellGroupConfig set as release even when there is no SCG, for a subsequent LTM and it is not considered as an error.
* Procedure assumptions: At LTM cell switch: UE uses TA from the network if it is provided (target TA or TA=0 or TA=same as src). If not provided and the UE is configured for UE based TA, then UE based TA is used. If the UE does not have/cannot derive the TA for target, the cell switch uses RACH. (FFS if more details need to be considered).
* Regardless if the UE is configured for UE based TA, the UE follows PDCCH-order, including requests to do RACH towards cand cells, for which the UE could derive the TA by itself.
* Regardless if the UE has performed RACH towards cand cell, the UE will follow configuration for UE based TA, if configured.
* For SCG LTM completion, when SRB3 is not configured, any transmission from the UE completes the procedure, and the network can ensure that such transmission takes place.

Scenario Clarifications:

- Do not support LTM for simultaneous PCell and PSCell change in Rel 18 (Nok)

* LTM for simultaneous PCell and PSCell change is not supported in Rel 18

- As baseline, the SCG LTM is supported unless any MN terminated SCG or split bearers are configured.Further discuss whether to support the intra-DU LTM without L2 reset, even if MN terminated SCG or split bearers are configured, as the special case of SCG LTM in Rel-18 (NEC)

* No support for further clarifications

Bearer Handlling for DC (vivo)

* No support for further enhancements

LTM Configuration Release: UE releases SCG LTM configs, when SCG is released (or/and at SCG failure?)

UE Stops measurement reporting immediately upon MCG failure / SCG Failure respectively (Samsung)

MN allocates measurement gaps for the L1 measurements configured for LTM, for MN and SN (samsung)

Info in SCG Failure info, LTM failure ind (Lenovo, NEC, ...)

MCG SCG ambiguity (Asus)

* Treat the above points in CR discussion

LTM and Condiional reconfiguration (ZTE, Samsung)

LTM and CHO fast recovery race condition (e.g. Docomo)

LTM and SCPAC (e.g OPPO)

LTM and DAPS – anything needed (e.g. OPPO, Samsung)

L3 handover with LTM config (Fujitsu)

LTM and NR-U MIMO CovEnh MBS IAB UAV SL NTN (Fujitsu, CMCC, Samsung, HW, Xiaomi ..)

* Postponed (we usually handle coexist issues in maint)
* In Candidate Cell TCI States Activation/Deactivation MAC CE, the TCI state IDs refer to the list outside candidate’s RRC container.
* IF R1 decide, follow R1 decision, IF R1 cannot decide, assume the following: In LTM Cell Switch Command MAC CE, the TCI state ID refers to the list outside candidate’s RRC container.
* For RACH-less LTM, RAN2 assume the source DU always informs the target DU about the beams indicated in the LTM cell switch MAC CE, which are UL/DL or joint TCI states that the source cell has indicated to the UE in the LTM cell switch MAC CE. Up to RAN3 how to capture this.
* As in the current MAC running CR, RAN2 confirms that UE prioritizes/first to select RA resource of CFRA indicated by LTM cell switch MAC CE if any. Otherwise, UE selects RA resource of CFRA indicated by RRC if any.
* RAN2 to confirm that MAC indicates to RRC the RACH-less case in SCG LTM (as in the endorsed running CR).
* RAN2 assumes for now to include both TCI state (for use for data transmission) and SSB index specifically for CFRA. If RAN1 decides that SSB index is not needed, can be removed later.
* RAN2 will design that the TCI state ID field is mandatory present.
* For UE considering CFRA indicated by LTM MAC CE; For now assume RSRP checking is not needed (i.e. to instead trigger CBRA as legacy HO with CFRA) – can revisit if justified.
* For RRC configured CFRA, UE selects from the RRC configured beams for CFRA (if above the RSRP threshold as in legacy); [No further spec impact]
* For CBRA, UE selects a beam based on RSRP and ignores indicated beam in CBRA. [No further spec impact]
* Assume that the TA value field is mandatory, using specific value “FFF” to indicate that no valid TA is provided (TA for the target)
* In MAC, the operation of “perform the BWP operation as specified in clause 5.15” in RA procedure does NOT apply to PDCCH-order based PRACH for LTM candidate cell;
* During on-going RACH-less LTM cell switch the UE monitors PDCCH, e.g. despite DRX configuration and/or measurement gap configuration.
* RAN2 does not support the 2-step RACH CFRA information in the LTM MAC CE.
* NR-U might not work with LTM (no clear consensus what is are the issues or impact to fix – timers and counters are mentioned), no consensus to fix this right now.
* Postpone rest of coexist proposals

Subsequent CPAC

* For S-CPAC, Consider this completed from Ran2 point of view (with the understanding that there are RRC details to be fixed)
* Proposal 1: For the handling of the used sk\_Counter:

UE removes the selected sk-Counter upon security update and UE select the first sk-counter;

* Proposal 2: Remove the following EN in the RRC CR:

*Editor’s Note: FFS on how to start conditional reconfiguration evaluation for subsequent CPAC for the following cases: after SCG is release; upon PSCell change/addition completion; upon PCell change completion.*

* Proposal 3: It is up to the NW to guarantee a valid SCPAC configuration after SCG release/PCell change/PSCell change.
* Proposal 4: Complete configuration flag for complete subsequent CPAC candidate configuration is supported. Assume the full configuration procedure is not used for SCAPC.
* Proposal 5: The subsequent execution condition is provided as an additional list for each candidate of execution condition to evaluate other candidate as captured in current CR.
* Proposal 7: The maximum number of maxSecurityCellSet-r18 is 9 (i.e. maxNrofCondCells+1).
* Proposal 8: The maximum sk-Counter number that can be configured for each cell set is 8.
* Proposal 9: Inter-node RRC message is used for reference configuration transfer (as captured in running CR).
* In this release, Assume to use the same target configuration for CPA and CPC (always)
* The legacy signalling CondReconfigToAddModList-r16 and CondReconfigToRemoveList-r16 can be used to update the candidate configuration for subsequent CPAC (similar to the legacy CPAC).
* P10: Need code revisited during ASN1 review
* P1: The SK-counter list parameter introduced in RRC-Reconfiguration can support the required signalling procedure with UE for the security life cycle management indicated in SA3.
* P2: From RAN2 perspective the proposed solution from SA3 for key-mismatch is sufficient.
* P3 : For the SA3 proposed NW behaviour related to Master-key update impact to SK-counters, The GNB implementation need to ensure that SK-counter-list is also replaced at UE whenever Master-Key-Update is triggered towards UE. No specification changes needed.
* P1: [11/13] It can be up to the NW implementation on whether and how to include the candidate PSCell(s) that have been prepared by other candidate SN(s) in the SN Addition Request message if the MN has received the response from other candidate SN(s), e.g. for other candidate SN(s), the MN can include only the prepared PSCell(s) in the associated recommend cell list(s). No change to the existing recommend cell list is expected.
* Proposal 4: [9/13] For intra-SN subsequent CPAC in MN format, the source SN informs the MN to generate the MN RRCReconfiguration message for intra-SN subsequent CPAC configuration. The detailed indicator is up to RAN3 decision, e.g. implicit or explicit indicator.
* Proposal 5: [10/13] For intra-SN subsequent CPAC in MN format, the source SN sends the prepared PSCell ID(s), the candidate SCG configuration(s) and associated execution condition(s) to the MN, to let the MN generate the final MN RRCReconfiguration message for intra-SN subsequent CPAC configuration. The detailed inter-node RRC signalling is up to the RRC CR discussion.
* Proposal 1a: [5/14] No need to capture a NOTE in the 37.340 specification. Just remove the following EN from the 37.340 CR.

|  |
| --- |
| *Editor’s note: FFS whether and how to include the candidate PSCell(s) that have been prepared by other candidate SN(s) into the SN Addition Request message.* |

* RAN2 confirms that both MN format and SN format can be used for intra-SN subsequent CPAC. And It’s up to the source SN to decide which format to be used.
* Proposal 3: [9/14] It’s up to RAN3 to discuss and decide the procedure for intra-SN subsequent CPAC in MN format.
* Proposal 6: It’s up to RAN3 to decide whether to introduce a separate flow chart and procedural text for intra-SN subsequent CPAC with MN involvement procedure. (related to proposal 3)
* LS out to RAN3 by email.
* The granularity to update the sk-counter configuration is per sk-counter list that is associated with a cell set ID.
* Rely on NW to guarantee the validity of servingSecurityCellSetID after normal PSCell change, i.e. NW update the sourceSecurityCellSetID if the SecurityCellSetID of target PScell is different.
* UE releases the stored sk-counter configuration and the entries within VarServingSecurityCellSetID if all SCPAC configurations are released.
* UE stops evaluating the subsequent CPC execution conditions upon MCG failure and SCG failure.
* UE maintains the subsequent CPAC configurations upon MCG failure and SCG failure and relies on explicit signalling to release.
* Follow LTM on SCPAC candidate cell configuration application.
* Assume that Common procedure is used for SCPAC execution for the candidate provided as MN format and SN format

CHO including target MCG and candidate SCGs for CPC CPA in NR-DC

* The maximum number of conditional reconfigurations maxNrofCondCells is 8 in Rel-18. i.e., assume that additional UE capability for higher number is not supported in this release.
* RRC inter-node message is used to transfer the execution condition parameters of candidate PSCells from candidate MN to source MN
* Send LS to RAN3, offline (CATT)
* Discuss offline, Send execution conditions, including meas object IE (FFS) and report config IE (parent IE) in HO command (inter-node), or cherry pick the parameters needed for this case.
* The target MN provides an reportConfigNR instance to the source MN with only the condEventA4 related parameters (a4-Threshold, hysteresis, timeToTrigger and rsType),add clarification in the filed description.
* meas object IE is not sent from T-MN to S-MN.
* LS out is approved in R2-2313670

Others

* If timer X is not configured the validation is not applied
* Conclusion: RAN2 cannot conclude the eEMR “enhanced measurements” either at current meeting, too many open points, (and late info from RAN4)
* Long email discussion starting after plenary conditional on extension, LS out to RAN4 on eEMR “enhanced measurements”
* R2 understanding, from functionality point of view: “Enhanced measurements” = R16 EMR + verification acc to R4 LS.
* We attempt to make a CR with solution (offline).
* R2 will not attempt to make CR now for the “additional measurements”.

#### 2.2.2 Remaining Open issues

Except for SCell/SCG setup delay improvement (Objective#7) that RAN2 cannot conclude at this meeting, all other objectives are considered as completed from RAN2 perspective. Suggest one-quarter extension for Objective#7. Any other issues found will be handled in RAN2 maintenance phase.

## 2.3 RAN3

#### 2.3.1 Agreements

**RAN3 #121bis (October 2023)**

R3-235762 (BL CR to 37.340) Introduction of subsequent CPAC, endorsed.

R3-235763 (BL CR to 37.340) Introduction of CHO with SCG(s), endorsed.

R3-235090 (BL CR to 38.401) for L1L2Mob, endorsed.

R3-235091 (BL CR to TS 38.423) Introduction of Subsequent CPAC, endorsed.

R3-235092 (BL CR to 38.473) Additions for L1/L2 triggered mobility, endorsed.

R3-235119 (BL CR to 38.423) Introduction of CHO with SCG(s), endorsed.

Signalling support for L1/L2 based inter-cell mobility:

* R3-235926 (TP for L1L2Mob BLCR for TS 38.401): Discussion on LTM procedure, Huawei, Samsung. The document was agreed.
* R3-235894 (TP for LTM BL CR to TS 38.473) F1AP impacts for LTM Ericsson. The document was agreed.

Support CHO in NR-DC

* R3-235250 (TP for BLCR TS 38.423) Miscellaneous issues on CHO with multiple SCGs, Lenovo, Nokia, Nokia Shanghai Bell, Ericsson, NEC, Huawei, LG Electronics, ZTE. The document was agreed.
* R3-235927 [TP to BL CR for TS 38.423, CHO with MRDC] Continuation of the discussions on enhancements for CHO with MR-DC, Nokia, Nokia Shanghai Bell, ZTE, Ericsson, Lenovo, Huawei, Samsung. The document was agreed.
* R3-235928 (TP to TS 38.423 BL CR) CHO with candidate SCG(s), Ericsson. The document was agreed.

Others

* R3-235851 (TP to BL CR for TS 37.340) on support of subsequent CPAC, ZTE, Ericsson, NEC. The document was agreed.
* R3-235929 (TP to TS 38.423 BL CR) Subsequent CPAC, Ericsson, Google, Samsung. The document was agreed.
* R3-235845 (TP for BLCR TS 38.473) On Subsequent CPAC, Lenovo. The document was agreed.

**RAN3 #122 (November 2023)**

**The R18 NR Mobility enhancements WI is completed in RAN3.**

* R3-237036, (BL CR to 37.340) Introduction of CHO with SCG(s) (CATT), endorsed as BL CR
* R3-237037, (BLCR to 38.401) for L1L2Mob (Huawei, Ericsson, Nokia, Nokia Shanghai Bell, ZTE), endorsed as BL CR
* R3-237038, (BL CR to 38.423) Introduction of CHO with SCG(s) (Lenovo, Ericsson, Huawei, Nokia, Nokia Shanghai Bell), endorsed as BL CR
* R3-237039, (BL CR to TS 38.423) Introduction of Subsequent CPAC (Huawei, ZTE), endorsed as BL CR
* R3-237040, (BLCR to 38.473) Additions for L1/L2 triggered mobility (Ericsson, Huawei, Nokia, Nokia Shanghai Bell, Intel Corporation, ZTE), endorsed as BL CR
* R3-237041, (BL CR to 38.473) On Subsequent CPAC (Lenovo), endorsed as BL CR
* [R3-238001](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-238001.zip), (BL CR to 37.340) Introduction of subsequent CPAC (ZTE, China Telecom, Huawei, China Unicom, LG Electronics, Samsung, Ericsson), endorsed as BL CR

Signaling Support for L1/L2 based Inter-Cell Mobility

* R3-237981, TP for LTM BL CR to TS 38.470 (ZTE, Huawei, CMCC, China Telecom, China Unicom, CATT). Agreed.
* [R3-238059](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-238059.zip), (TP for L1L2Mob BLCR for TS 38.401): Discussion on LTM procedures (Huawei). Agreed.
* [R3-238060](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-238060.zip), (TP to BLCR for TS 38.423) Left issues remaining in LTM (CATT). Agreed.
* [R3-237980](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-237980.zip), (TP for LTM BL CR to TS 38.473) Solutions for LTM (Ericsson). Agreed.
* Update the signaling diagrams to capture signaling of the RRCReconfigurationComplete message when the UE has accessed the target cell in BL CR of TS 38.401.
* Agree that the gNB-CU utilizes parallel messages to signal the LTM CSI Resource Configuration to the candidate NB-DU, and remove the FFS stating “FFS on step 7 and 8 on whether should be parallel or single.”
* Introduce a LTM Configuration ID for mapping to cell ID of as part of the LTM preparation toward the Source gNB-DU in UE CONTEXT MODIFICATION REQUEST message.
* Introduce a LTM Configuration ID for mapping to cell ID of as part of the LTM preparation toward the candidate gNB-DU in UE CONTEXT SETUP/MODIFICATION REQUEST message.
* Common name e.g. LTM cell switch notification with different directions of UL and DL. Details to be check offline.
* Common name e.g. TA information transfer btw CU and DU with different directions of UL and DL. Details to be check offline.
* CU decides which SSB(s) to the candidate cell(s) in CSI Resource Configuration.
* Step 7 and 8 are conditional (may be sent btw CU and candidate DU(s)).
* New agreements: Use F1 Setup/gNB Configuration Update procedure to retrieve RS configuration before step 2.
* No partial admission considering the procedure is triggered per cell.
* Selected beam transfer: Message name: UL Cell Switch Notification/DL Cell Switch Notification
* TA acquisition: Message name: DU-CU TA Information Transfer/CU-DU TA Information Transfer
* SCG release: Add a new cause value “LTM Triggered” for S-NODE RELEASE REQUEST message, and SN cannot reject the release request in this case.

Support CHO in NR-DC

* [R3-237307](file:///D:\会议硬盘\TSGR3_122\Docs\R3-237307.zip), (TP for CHO with NR-DC to TS 38.423): Conditional configuration cancel (ZTE, Nokia, Nokia Shanghai Bell, LG Electronics, Huawei, Ericsson, Lenovo). Agreed.
* [R3-237978](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-237978.zip), (TP for CHO with NR-DC to TS 38.423, TS37.340): Left issue on CHO with multiple SCG (ZTE). Agreed.
* [R3-238049](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-238049.zip), (TP to BLCR TS38.423) Considerations on direct data forwarding (Samsung). Agreed.
* [R3-238050](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-238050.zip), (TPs to CHO with SCG BL CRs of TS 37.340 and TS 38.423) support of CHO with SCGs (Huawei). Agreed.
* [R3-238051](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-238051.zip), Almost complete discussions on CHO with SCGs (TP for TS 38.423) (LG Electronics Inc.). Agreed.
* The “FFS” is removed from the new flag indicating that the existing IEs are to be ignored.
* Data forwarding Path and direct forwarding path availability are designed for simple solutions.

Others

* [R3-237949](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-237949.zip), [DRAFT] Reply LS on subsequent CPAC (ZTE). Agreed.
* [R3-238022](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-238022.zip), (TP to BLCR TS38.401 and TS38.423) Discussion on subsequent CPAC (Samsung). Agreed.
* [R3-238053](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-238053.zip), Almost complete discussions on subsequent CPAC (TP for TS 38.423) (LG Electronics Inc.). Agreed.
* [R3-238054](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-238054.zip), TP to BLCR for 37.483 on subsequent CPAC (CATT). Agreed.
* Only use MN format for co-existence between intra-SN and inter-SN S-CPAC.
* The coordination of the usage of MN format or SN format is based on OAM-configuration/signalling in case of the deployment of S-CPAC for intra-SN and inter-SN cases.
* RAN3 agrees to support the coexistence of subsequent CPAC and legacy CPAC.
* [R3-238052](file:///D:\会议硬盘\TSGR3_122\Inbox\R3-238052.zip), (TP to BL CR to TS 37.340, S-CPAC) Complete RAN3 part of the S-CPAC solution. Agreed.

#### 2.3.2 Remaining Open issues

RAN3 concluded their works in this meeting. Any issues found are being handled in RAN3 maintenance phase.

## 2.4 RAN4

#### 2.4.1 Agreements

**RAN4 #108bis (October 2023)**

* WF on NR Mobility Enhancements (part 1) [1]
* WF on R18 Further NR mobility enhancement – Improvement on SCell/SCG setup delay and Enhanced CHO [2]
* WF on RRM performance requirements of R18 Further NR mobility enhancement [3]

**Core Part**

L1/L2 based inter-cell mobility

* SFN acquisition:
  + No extra time for SFN acquisition toward target cell is needed, if
    - PDCCH-order RACH or cell switch command is triggered after network received the L1-RSRP measurement report or L3 measurement report with SBI, or
    - SFN of serving cell from which the PDCCH order/cell switch command is received and target cell are same.
  + Otherwise, FFS
* After the TCI state of a neighbour cell is activated before cell switch command, UE performs SSB based T/F tracking. As baseline, UE is not required to perform BB/RF preparation for RACH transmission or cell switch.
* Leave the discussion of whether to consider TCI state activation on multiple neighbour cell before cell switch command to RAN1 and no discussion in RAN4.
  + FFS: RAN4 requirements to be defined based on RAN1 outcome-
* For UE not supporting using L3 measurement in L1 report, only if UE is capable of performing LTM L1 measurements for RTD > CP and supports TCI state activation on neighbour cell before cell switch command, then UE supports TCI state activation on neighbour cell before cell switch command when RTD>CP.
* When the target cell is a current serving cell (role switch) and the target TCI state in LTM cell switch command or SSB index indicated in PDCCH order is already on the active TCI state list for that serving cell or on the LTM candidate cell active TCI state list, consider the target TCI state activated.
* The value of additional time for RF/BB preparation and RF re-tuning
  + For the case of PRACH bandwidth within active UL BWP, ∆RF/BB\_preparation = 0
  + For the case of PRACH bandwidth not within any of the configured UL BWPs of any active serving cell
    - Alt1: Define a single value
    - Alt2: Introduce UE capability to report the time needed for RF/BB preparation and RF retuning, down-select from [1ms, 3ms, 5ms, 8ms, 10ms, 15ms].
* Leave the interruption on UL during PDCCH order RACH transmission to RAN1
* Introduce a UE capability to indicate whether there will be interruption on DL during PDCCH order RACH transmission to target cell. FFS the details of the capability.
* Interruption due to RF/BB retuning to target cell before RACH transmission or retuning back to serving cell after RACH transmission
  + When RACH bandwidth is in the UL active BWP, reuse legacy N symbols.
  + For the case of PRACH bandwidth outside active UL BWP but within one of configured UL BWPs of any active serving cell, reuse interruption requirements of BWP switching on other serving cells in NR-DC for asynchronous scenarios which are defined in 38.133 cl. 8.2.4.2.5.
* Interruption or scheduling restriction due to additional T/F tracking if needed during PDCCH order RACH delay can be covered by scheduling restriction due to L1/L3 measurement or MG
* UE is not required to perform L1 measurements on unknown cell.
* known cell condition for L1-RSRP measurement
  + In L1-RSRP measurement for neighbour cell, target cell is considered as known if the following conditions are met in this requirement:
    - The UE has performed L3 measurement on the target cell, and
      * FFS whether to add time constraint e.g. during the last [5] seconds
    - The SSB from the target cell configured for L1 measurement remains detectable according to the cell identification requirements specified in clause 9.2 and 9.3.
  + Otherwise, it is unknown
* Measurement requirements for UE incapable of RTD>CP or UE incapable of measuring multiple cells on the same OFDM symbol when actual RTD>CP
  + - In FR2, measurement period follows the agreement of issue 2-3-3-2 (Measurement period of intra-frequency L1-RSRP measurement for UE capable of RTD>CP in FR2 if UE only performs L1-RSRP measurement on a single intra-frequency layer)
* Measurement period of intra-frequency L1-RSRP measurement for UE capable of RTD>CP in FR1 if UE only performs L1-RSRP measurement on a single intra-frequency layer
  + For UE capable of RTD>CP, if only a single intra-frequency layer is configured for measurement, the legacy measurement period specified in R17 for FR1 non-serving cell are also applicable.
  + FFS if the number of cells to be measured exceed UE capability.
  + Above agreement applies if inter-frequency L1 measurement without gap is not configured.
* Measurement period of intra-frequency L1-RSRP measurement for UE capable of RTD>CP in FR2 if UE only performs L1-RSRP measurement
  + UE only to measure the cell in the TCI state list (if any), the serving cell, and UE is allowed to measure any other cell which is up to UE implementation.
    - The measurement delay is scaled by 3 if neighboring cells configured to be measured is equal to or larger than 2.
    - Note: the above is in principle agreeable, further refinement on the wording is allowed.
  + When # of neighboring cells configured/activated to be measured is equal to or larger than 2
    - When TCI state of neighbor cell is activated, UE performs L1-RSRP measurement on the neighbor cell whose TCI state is activated and the serving cell. UE may measure any other cell(s) based on UE implementation
      * The measurement period of serving cell is R15/R16 SSB based L1-RSRP measurement period scaled by 3
      * The measurement period of the neighbor cell whose TCI state is activated is R15/R16 SSB based L1-RSRP measurement period scaled by 3
      * For the other neighbor cells: no measurement delay requirements

The above principle and requirements apply when the NW activate TCI state(s) from only one neighbor cell.

FFS: the requirements when TCI states are activated on neighbor cells in multiple bands.

* + - When TCI state of all the neighbor cells are not activated, UE performs L1-RSRP measurement on the serving cell and neighbor cell(s).
      * The measurement period of serving cell is R15/R16 SSB based L1-RSRP measurement period scaled by 3
      * The measurement period of the neighbor cells is R15/R16 SSB based L1-RSRP measurement period scaled by 3\*(# of neighbor cells)
  + When # of neighboring cells configured/activated to be measured is 1, reuse R17 ICBM measurement delay requirements.
* In FR2, for inter-frequency L1-RSRP with type 1 gap, legacy CSSFwithingap is supposed to be updated: each cell which is configured for L1-RSRP measurement is regarded as one independent candidate to be measured in a gap.
* Measurement requirements (measurement period, measurement restriction and scheduling restriction) of inter-frequency L1-RSRP measurement without gap can follow the requirements of intra-frequency L1-RSRP measurement.
* Specify cell switch delay requirements for PSCell switch.
* Processing time during cell switch delay
  + Tprocessing,2 /T LTM\_processing can be 20ms for the intra-FR cell switch. Meanwhile, further discuss and down-select based on the two options:
    - Option 1: FFS whether a smaller value can be considered based on other conditions/scenarios. FFS additional UE capabilities can be introduced for these conditions/scenarios.
    - Option 2: introduce UE capability with up to 2 candidate values, one value is 20ms, and FFS the other one.
  + Tprocessing,2 /T LTM\_processing for inter-FR cell switch is twice of that for intra-FR cell switch.
* T/F fine tracking: TΔ and Tmargin during cell switch delay
  + If TCI state of target cell has been activated before cell switch command, and the TCI state indicated is in the active TCI state list, and measurement period of L1-RSRP is no longer than 160ms, TΔ = 0 and Tmargin = 0.
  + Else If TCI state indicated in cell switch command is not in the active TCI state list that has been activated for the target cell, when the measurement period of L1-RSRP is no longer than 160ms, whether additional delay is needed is FFS.
  + Otherwise, TΔ=1 Tfirst-RS, Tmargin = 2ms.
* There is no need to explicitly have TCI state switching component in cell switch delay
* Execution time during cell switch delay
  + From RAN4 perspective, introduce new optional UE capability for early ASN.1 decoding and validity/compliance check [of LTM candidates]. FFS on capability design.
    - For UE not supporting [early ASN.1 decoding and validity/compliance check], Texecution\_time/Ttarget-RRC-processing for ASN.1 decoding and validity/compliance check of target cell configuration should be added in the cell switch delay requirements. The value is 10ms.
  + Further discuss the conditions that the UE with new capability can work with early ASN.1 decoding and validity/compliance check.
* Beam application time has already been covered in cell switch delay requirements.
* No need to define beam application time on top of cell switch delay from RAN4’s point.
* Send LS to RAN1 about RAN4’s conclusion and the related agreements on cell switch delay.

Improvement on Scell/SCG setup/resume

* Solutions based on existing measurement
  + The measurements are considered valid if both of the following conditions are satisfied
    - A) the measurement are performed within the last [X] seconds before it is reported
      * X value is network configured. Signalling details are up to RAN2
      * FFS on the X value(s) and will be decided by RAN4
      * If X is not defined then no requirements will be introduced
    - B) the reported measurement results satisfy measurement accuracy [at the measurement instance]
    - FFS on side conditions
  + Do not introduce a dedicated signalling for indication of measurements validity from UE to gNB

Enhanced CHO configurations

* CHO including target MCG and target SCG in NR-DC (obj. 3)
  + Define requirements for the following additional scenarios
    - FR1-FR1 NR-DC to FR1-FR2 NR-DC
    - FR1-FR2 NR-DC to FR1-FR1 NR-DC
* CHO including target MCG and candidate SCG for CPC/CPA in NR-DC (obj. 4)
  + fix the big CR to capture the following scenarios correctly for obj.4.
    - FR1-FR1 NR-DC to FR1-FR1 NR-DC,
    - FR1-FR1 NR-DC to FR1-FR2 NR-DC,
    - FR1-FR2 NR-DC to FR1-FR1 NR-DC,
    - FR1-FR2 NR-DC to FR1-FR2 NR-DC.

**Performance Part**

* RAN4 to define inter-frequency L1-RSRP measurement accuracy requirements on LTM neighbor cell

**RAN4 #109 (November 2023)**

* WF on NR Mobility Enhancements (part 1) [4]
* WF on R18 Further NR mobility enhancement – part 2 [5]
* WF on R18 Further NR mobility enhancement – RRM performance requirements [6]

**Core Part**

L1/L2 based inter-cell mobility

* Assuming there is no FDD above 3GHz, RAN4 requirements do not apply for the following FR2 inter-frequency cases:
  + NW doesn’t configure UE to perform neither L3 measurement with SSB index nor L1 measurement before triggering RACH toward neighbour cell or cell switch, and
  + SFN of serving cell from which the PDCCH order/cell switch command is received and target cell are different.
* RAN4 to define a time gap between TCI state activation and PDCCH order RACH or cell switch. If PDCCH order or cell switch cmd is received before the time gap, additional time for T/F tracking in PDCCH order RACH delay or cell switch delay requirement is needed.
* Update the agreement

From: For UE not supporting using L3 measurement in L1 report, only if UE is capable of performing LTM L1 measurements for RTD > CP and supports TCI state activation on neighbour cell before cell switch command, then UE supports TCI state activation on neighbour cell before cell switch command when RTD>CP.

To: For UE not supporting using L3 measurement in L1 report, only if UE is capable of performing LTM L1 measurements for RTD > CP and supports TCI state activation on neighbour cell before cell switch command, all the requirements defined for TCI state pre-activation before cell switch command if any, are applicable when RTD>CP.

* As baseline, if SSB index indicated in PDCCH order is not in the active TCI state list that has been activated, one complete SSB burst is needed for fine time tracking.
* additional time for DL synchronization when needed in the delay requirements for PDCCH ordered RACH before cell switch command
  + For FR2, one Tssb delay is always assumed before UE transmit PDCCH-ordered RACH.
  + For FR1, when TCI state associated the PDCCH-order RACH has not been activated,
    - one Tssb delay is always assumed before UE transmit PDCCH-ordered RACH.
  + For FR1, when TCI state associated the PDCCH-order RACH is activated,
    - If L1-RSRP measurement delay is less than or equal to 160ms, Tssb is not needed. UE is required to meet the UL Tx timing accuracy requirements
    - If L1-RSRP measurement delay is more than 160ms, UE is allowed to transmit PDCCH-ordered RACH with or without one Tssb delay. No UE UL Tx timing accuracy requirement will be defined.
* For the case of PRACH bandwidth not within any of the configured UL BWPs of any active serving cell
  + Introduce UE capability to report the time needed for RF/BB preparation and RF retuning, down-select from [1ms, 3ms, 5ms, 10ms].
* Interruption due to RF/BB retuning to target cell before RACH transmission or retuning back to serving cell after RACH transmission: when PRACH bandwidth is not within any of the configured UL BWPs of any active serving cell
  + The interruption on both UL and DL is Y, which is up to UE capability. Candidate values for Y: 0.25ms, 0.5ms, 1ms and 2ms.
* Location of interruption due to RF/BB retuning to target cell before RACH transmission or retuning back to serving cell after RACH transmission
  + Location of the interruption due to RF retuning is before and after the RACH transmission.
* n-TimingAdvanceOffset is necessary for UE. Send LS to RAN2 and cc RAN1. Work on the wording offline.
* In the derivation of UL timing of PDCCH-ordered RACH on target neighboring cell, DL timing of the target neighboring cell which to transmit UL on should be used as a reference unless further agreement in other WG. If any further agreement in other WG, RAN4 will follow the agreement.
* Whether to define UL adjustment timing requirements for the first UL on target cell before cell switch command, i.e. PDCCH ordered RACH
  + Discuss this issue in maintenance part if RAN1/2 agrees to support using UE based TA measurement to adjust the UL timing of PDCCH ordered RACH on target cell.
* In Rel-18, for LTM L1 measurement, RAN4 RRM requirements are applicable only if L1 measurement layer is configured on the same frequency as one of current L3 MO.
  + Note: From network configuration perspective, whether this limitation is not needed is up to other WG agreement.
* Update the following agreement:

From: UE is not required to perform L1 measurements on unknown cell.

To: L1 measurement requirements are NOT applied to unknown candidate cells.

* Add the time constraint “The UE has performed L3 measurement on the target cell during the last [X] seconds” in known cell condition for L1-RSRP measurement.
* If deriveSSB-IndexFromCell and deriveSSB-IndexFromCellInter-r17 are not enabled, but UE has performed L3 measurement with SSB index on the candidate cell, no additional time is needed
* If deriveSSB-IndexFromCell and deriveSSB-IndexFromCellInter-r17 are not enabled, and UE has not performed L3 measurement without SSB index reading on the candidate cell, additional time for time index detection is needed
* For L1-RSRP measurement on neighbour cell, UE measures only one intra-frequency layer on each FR2 band in CA scenario.
  + Selection of the single layer for intra-frequency measurement on a FR2 band shall follow existing L3 measurement, i.e, this single intra-frequency layer shall be:
    - PCC when UE is configured with SA NR operation mode with PCC in the band; or
    - PSCC when UE is configured with EN-DC with PSCC in the band; or
    - PSCC when UE is configured with NR-DC with PSCC in the band; or
    - One of the SCCs on which UE is configured to report SSB based measurements when neither PCC nor PSCC is in the same band, so that the selected SCC shall be an SCC where the UE is configured with SS-RSRP measurement reporting if such SCC exists, otherwise the selected SCC is determined by UE implementation.
* In Rel-18, if the number of cells/SSB NW configured/activated to measure exceeds UE capability,
  + if TCI state of all the neighbour cells are not in the active TCI state list, it is up to UE implementation on how to choose cells/SSB to measure.
  + Otherwise, UE should at least measure cells which are activated for TCI state within UE capability (# of TCI states supported by UE) and additional cells to measure is up to UE implementation.
* Scenario of SSB periodicity of FR2 intra-frequency neighbour cell equals to SMTC periodicity in R18 LTM is supported.
  + Agree the following as baseline:
    - [When the SSB periodicity of FR2 intra-frequency cell is fully overlapped with SMTC periodicity of inter-frequency neighbour cell, the existing sharing factor P used for L1/L3 measurements can be reused, i.e., P =3 for L1 measurement and P=1.5 for L3 measurement.]
  + Further discuss whether to support the following optimization:
    - In FR2, L1-RSRP measurement period of less than 160ms is only possible under following conditions. RAN4 to discuss the feasibility of it and methods to achieve 160ms L1-RSRP measurement period.
    - L3 measurements are suspended after TCI state activation
    - N is 1 or reduced to some other value smaller than 8 (i.e., beam sweeping or reduced after TCI state activation for certain time)
    - RAN4 to find a method to achieve less than 160ms measurement period or a method to skip fine time tracking (e.g., by performing fine time tracking in parallel to UE processing). If RAN4 did not find a method to achieve less than 160ms L1-RSRP periodicity or a method to remove fine time tracking from the cell switch delay, for at least one configuration, RAN4 to send LS to RAN1 and RAN2 to convey pre-sync or pre-TCI state activation is not suitable/applicable for FR2.
* whether to consider L1-RSRP measurement on deactivated SCell
  + Discuss this issue in maintenance part if RAN1/2 agree to support L1-RSRP measurement on deactivated SCell
* Measurement period for UE incapable of RTD>CP or UE incapable of measuring multiple cells on the same OFDM symbol when actual RTD>CP
  + when the actual RTD of serving cell and neighbour cell is no larger than CP, the legacy measurement period, measurement restriction and scheduling restriction defined for non-serving cell in R17 apply for intra-frequency L1-RSRP measurement on neighbour cell.
  + when actual RTD>CP, no RAN4 requirements.
* Measurement period of intra-frequency L1-RSRP measurement for UE capable of RTD>CP in FR1 if UE performs L1-RSRP measurement on multiple intra-frequency layers
  + For multiple intra-frequency layers, additional scaling factor (i.e., number of frequency layers including intra-frequency and inter-frequency without gap if supported and configured) is to be scaled on top of measurement period specified for single frequency layer.
* Scheduling restriction of intra-frequency L1-RSRP measurement for UE capable of RTD>CP
  + For FR2:
    - For UE capable of RTD>CP, scheduling restriction should be extended by one more symbol before and after SSB symbols.
  + For FR1:
    - Follow existing scheduling restriction defined for L3 measurement.
      * Note: companies can further check the case with mix numerologies
* In FR1, within one gap occasion, if there is L1 measurement but no L3 occasion within measurement gap on the same frequency layer, the L1-RSRP measurement is regarded as one independent candidate to be measured in a gap when calculating CSSF for other overlapped inter-frequency layers.
* For inter-frequency L1-RSRP measurement with MG, the number of samples
  + M = 2 if higher layer parameter timeRestrictionForChannelMeasurement is configured,
  + Otherwise M= 4.
* Define inter-frequency L1-RSRP measurement period with MG in FR1 as:

|  |  |
| --- | --- |
| **Condition** | **T L1-RSRP\_SSB\_measurement\_period\_inter** |
| No DRX | Max(Treport, Ceil(M \* Kgap) × Max(MGRP, SSB period)) × CSSFinter |
| DRX cycle ≤ 320ms | Max(Treport, Ceil(M × 1.5 \* Kgap) × Max(MGRP, SSB period, DRX cycle)) × CSSFinter |
| DRX cycle > 320ms | Ceil(M \* Kgap) × DRX cycle × CSSFinter |
| The definition of Kgap is the same as L3 measurement which is a scaling factor for a SSB frequency layer to be measured within an associated measurement gap pattern.  M = **[1 or 2]** when timeRestrictionForChannelMeasurement is configured. Otherwise M = [**3 or 4**]. | |

* Define inter-frequency L1-RSRP measurement period with MG in FR2 as:

|  |  |
| --- | --- |
| **Condition** | **T L1-RSRP\_SSB\_measurement\_period\_inter** |
| No DRX | Max(Treport, Ceil(Kgap × M\*N)× Max(MGRP, SSB period)) × CSSFinter |
| DRX cycle ≤ 320ms | Max(Treport, Ceil(1.5 \* Kgap × M\*N) × Max(MGRP, SSB period, DRX cycle)) × CSSFinter |
| DRX cycle > 320ms | Ceil(Kgap × M\*N) × DRX cycle × CSSFinter |
| The definition of Kgap is the same as L3 measurement which is a scaling factor for a SSB frequency layer to be measured within an associated measurement gap pattern.  M = [**1 or 2**] when timeRestrictionForChannelMeasurement is configured. Otherwise M = [**3 or 4**]. | |

* Reuse LTM PCell switch delay for PSCell.
* Define LTM PSCell switch delay requirements in section 8.
* Due to limited time, further discuss the optimization on cell switch procedure in later releases.
* Tinterruption of PCell/PSCell switch
  + TLTM-RRC-processing/Texecution is part of the interruption
  + Further discussion whether to introduce UE capability on “TLTM-RRC-processing/Texecution + Tprocessing,2” in maintenance phase.
* known cell conditions for cell switch delay
  + The target cell is known if it has been meeting the following conditions:
    - During the last 5 seconds before the reception of the handover cell switch command:
      * the UE has sent a valid L1 or L3 measurement report for the target cell and
      * One of the SSBs measured from the NR target cell being configured remains detectable according to the cell identification conditions specified in clause 9.2 for intra-frequency cell and in clause 9.3 for inter-frequency cell,
      * One of the SSBs measured from the target cell also remains detectable during the cell switch delay according to the cell identification conditions specified in clause 9.2 for intra-frequency cell and in clause 9.3 for inter-frequency cell.
    - otherwise it is unknown.
  + FFS whether and how to address the mismatch on definition of known between existing HO requirement and cell switch delay requirements.
* known TCI state conditions for cell switch delay
  + The target joint DL/UL TCI state or separate DL and UL TCI states in the LTM cell switch command are known if the following conditions are met:
    - The target DL/UL TCI state in the LTM cell switch command is known if the following conditions are met:
      * During the period from the last transmission of the RS resource used for the L1-RSRP measurement reporting for the target DL/UL TCI state to the completion of LTM cell switch, where the RS resource for L1-RSRP measurement is the RS in target DL/UL TCI state or QCLed to the target DL/UL TCI state
        + LTM cell switch command is received within 1280 ms upon the last transmission of the RS resource for beam reporting or measurement
        + The UE has sent at least 1 L1-RSRP report for the target DL/UL TCI state before the LTM cell switch command
        + The target DL/UL TCI state remains detectable during the LTM cell switching period
        + The SSB associated with the target DL/UL TCI state remain detectable during the cell switching period

SNR of the TCI state ≥ -3dB

* + - Otherwise, the target joint DL/UL TCI state or separate DL and UL TCI state is unknown.

NR-DC with selective activation of cell groups

* Define RAN4 delay requirement for Subsequent PSCell addition.

Improvement on Scell/SCG setup/resume

* Rel-16 EMR and R18 enhancement to SCell/SCG setup delay are independent features.
* If accuracy requirements are met, the measurement results are valid for IDLE/INACTIVE measurements within the last [X] sec before msg1 transmission for RRC resume/setup request.
* solution based on existing measurement
  + ‘X’ value
    - If network doesn’t provide configuration of the timer, UE is not required to perform validity check.
    - Candidate values for ‘X’: 5s, 10s, 20s, 50s, 100s
  + Confirm that in solution based on existing measurement the reported measurement results satisfy measurement accuracy at the measurement instance.

#### 2.4.2 Remaining Open issues

**Core part**

RAN4 concluded their works on core part in this meeting. Any issues found are being handled in RAN4 maintenance phase.

**Performance part**

L1/L2 based inter-cell mobility

* Measurement accuracy
  + Further discuss the side condition for intra-frequency and inter-frequency L1-RSRP measurement accuracy requirements
  + Further discuss how to define Inter-frequency L1-RSRP measurement accuracy requirements
* Further discuss which test cases to define and how to define

NR-DC with selective activation of cell groups

* Further discuss which test cases to define and how to define.

Improvement on Scell/SCG setup/resume

* Further discuss which test cases to define and how to define.

Enhanced CHO configurations

* Further discuss which test cases to define and how to define.

## 2.5 RAN5

#### 2.5.1 Agreements

#### 2.5.2 Remaining Open issues

#### 2.5.3 Remaining Open issues with cross-WG dependencies

## 2.6 RAN6

#### 2.6.1 Agreements

#### 2.6.2 Remaining Open issues

## 3. Detailed progress in SA/CT WGs since last TSG meeting (for all involved WGs)

NOTE: This section only needs to be filled in for WI/SIs where there is a corresponding relevant WI/SI in SA/CT.

## 3.1 SAx/CTs

#### 3.1.1 Agreements with cross-TSG impacts

#### 3.1.2 Remaining Open issues with cross-TSG impacts

NOTE: This section should also flag any critical dependencies that need TSG attention.

## 4. References

NOTE: This can be e.g. a list of all related Tdocs in the affected WGs since last TSG, references to LSs, produced TRs/TSs, the work/study item description or status reports of previous TSGs.

1. R4-2317330 WF on NR Mobility Enhancements (part 1), MediaTek inc.
2. R4-2317328 WF on R18 Further NR mobility enhancement – Improvement on SCell/SCG setup delay and Enhanced CHO, Apple
3. R4-2317329 WF on RRM performance requirements of R18 Further NR mobility enhancement, Apple
4. R4-2321621 WF on NR Mobility Enhancements (part 1), MediaTek inc.
5. R4-2321398 WF on R18 Further NR mobility enhancement – part 2, Apple
6. R4-2321399 WF on R18 Further NR mobility enhancement – RRM performance requirements, Apple

**RAN1#114bis (October 2023)**

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| [**R1-2308889**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2308889.zip) | Maintenance of L1 enhancements for inter-cell beam management | Huawei, HiSilicon |
| [**R1-2308890**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2308890.zip) | Maintenance of timing advance management to reduce latency | Huawei, HiSilicon |
| [**R1-2308934**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2308934.zip) | Discussion on remaining issues of L1 enhancements for inter-cell beam management | FUTUREWEI |
| [**R1-2308935**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2308935.zip) | Network assisted UE TA determination with high accuracy | FUTUREWEI |
| [**R1-2308993**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2308993.zip) | Remaining issues on L1 enhancements for inter-cell beam management | Spreadtrum Communications |
| [**R1-2308994**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2308994.zip) | Remaining issues on timing advance management to reduce latency | Spreadtrum Communications |
| [**R1-2309020**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309020.zip) | Maintenance on L1 enhancements for inter-cell beam management | ZTE |
| [**R1-2309021**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309021.zip) | Maintenance on TA management to reduce latency | ZTE |
| [**R1-2309083**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309083.zip) | L1 enhancements for L1/L2-triggered mobility | vivo |
| [**R1-2309084**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309084.zip) | TA management for L1/L2-triggered mobility | vivo |
| [**R1-2309109**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309109.zip) | FL plan on L1 enhancements for LTM at RAN1#114-bis | Moderator (Fujitsu, MediaTek) |
| [**R1-2309110**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309110.zip) | FL summary 1 on L1 enhancements for inter-cell beam management | Moderator (Fujitsu, MediaTek) |
| [**R1-2309111**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309111.zip) | FL summary 2 on L1 enhancements for inter-cell beam management | Moderator (Fujitsu, MediaTek) |
| [**R1-2309161**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309161.zip) | Maintenance of L1 enhancements to inter-cell beam management | Ericsson |
| [**R1-2309162**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309162.zip) | Maintenance of TA management for LTM | Ericsson |
| [**R1-2309216**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309216.zip) | FL plan on L1 enhancements for LTM at RAN1#114-bis | Moderator (Fujitsu, MediaTek) |
| [**R1-2309295**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309295.zip) | Remaining issues on L1 enhancements for inter-cell beam management | NEC |
| [**R1-2309322**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309322.zip) | Remaining issues on L1 enhancements for inter-cell beam management | Lenovo |
| [**R1-2309323**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309323.zip) | Remaining issue of timing advancement management for L1L2 mobility | Lenovo |
| [**R1-2309383**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309383.zip) | Remaining details on L1 enhancements for inter-cell beam management | Samsung |
| [**R1-2309384**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309384.zip) | Remaining issues on candidate cell TA management for NR L1/L2 mobility enhancement | Samsung |
| [**R1-2309464**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309464.zip) | Discussion on remaining issue about L1 enhancements for LTM | xiaomi |
| [**R1-2309534**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309534.zip) | Maintenance on L1 enhancements for inter-cell beam management | CATT |
| [**R1-2309535**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309535.zip) | Remaining issues on TA management to reduce latency | CATT |
| [**R1-2309579**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309579.zip) | Remaining Issues of Inter-cell beam management enhancement | OPPO |
| [**R1-2309580**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309580.zip) | Remaining Issues of Timing Advance Management | OPPO |
| [**R1-2309649**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309649.zip) | Remaining issues on L1 enhancements for inter-cell beam management | Fujitsu |
| [**R1-2309679**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309679.zip) | Remaining issues on L1 enhancements for inter-cell beam management | CMCC |
| [**R1-2309680**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309680.zip) | Remaining issues on timing advance management to reduce latency | CMCC |
| [**R1-2309727**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309727.zip) | Discussion on L1 enhancements for inter-cell beam management | FGI |
| [**R1-2309728**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309728.zip) | Remaining issues on TA management for LTM | FGI |
| [**R1-2309733**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309733.zip) | Remaining Issues on Layer-1 Enhancements for L1/L2-triggered Mobility | Nokia, Nokia Shanghai Bell |
| [**R1-2309734**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309734.zip) | Remaining Issues on Timing Advance Management for L1/L2-triggered Mobility | Nokia, Nokia Shanghai Bell |
| [**R1-2309739**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309739.zip) | Remaining issues on L1 enhancement for LTM | Panasonic |
| [**R1-2309786**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309786.zip) | Discussion on L1 enhancements for inter-cell beam management | Google |
| [**R1-2309787**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309787.zip) | Discussion on timing advance management to reduce latency | Google |
| [**R1-2309841**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309841.zip) | L1 enhancements to inter-cell beam management | Apple |
| [**R1-2309842**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309842.zip) | Timing advance management for L1/L2 Mobility | Apple |
| [**R1-2309876**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309876.zip) | Remaining issues on L1 enhancements for inter-cell beam management | KDDI Corporation |
| [**R1-2309953**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309953.zip) | Remaining issues on L1 enhancements | InterDigital, Inc. |
| [**R1-2309954**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309954.zip) | Remaining details on timing advance management | InterDigital, Inc. |
| [**R1-2309982**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2309982.zip) | Remaining issues on L1 enhancements for inter-cell beam management | MediaTek Inc. |
| [**R1-2310040**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310040.zip) | Remaining issues on L1 enhancements for inter-cell mobility | NTT DOCOMO, INC. |
| [**R1-2310041**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310041.zip) | Remaining issues on TA enhancements for inter-cell mobility | NTT DOCOMO, INC. |
| [**R1-2310070**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310070.zip) | Discussion on TA management to reduce latency | CAICT |
| [**R1-2310149**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310149.zip) | L1 Enhancements for Inter-Cell Beam Management | Qualcomm Incorporated |
| [**R1-2310150**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310150.zip) | TA management to reduce latency for L1/L2 based mobility | Qualcomm Incorporated |
| [**R1-2310360**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310360.zip) | Moderator summary on timing advance management for LTM: Round 1 | Moderator (CATT) |
| [**R1-2310441**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310441.zip) | Moderator summary on timing advance management for LTM: Round 2 | Moderator (CATT) |
| [**R1-2310506**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310506.zip) | Moderator summary on timing advance management for LTM: Round 3 | Moderator (CATT) |
| [**R1-2310545**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310545.zip) | Session notes for 8.7 (Maintenance on further NR mobility enhancements) | Ad-Hoc Chair (CMCC) |
| [**R1-2310642**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310642.zip) | FL summary 3 on L1 enhancements for inter-cell beam management | Moderator (Fujitsu, MediaTek) |
| [**R1-2310643**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310643.zip) | Final FL summary on L1 enhancements for inter-cell beam management | Moderator (Fujitsu, MediaTek) |
| [**R1-2310676**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_114b/Docs/R1-2310676.zip) | Rel-18 RRC parameters for NR mobility enhancement WI for RAN1 114bis | Rapporteur (Apple) |

**RAN1#115 (November 2023)**

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| [**R1-2310830**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2310830.zip) | Remaining issues of L1 enhancements for inter-cell beam management | FUTUREWEI |
| [**R1-2310831**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2310831.zip) | Remaining issues with UE based TA determination | FUTUREWEI |
| [**R1-2310848**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2310848.zip) | Maintenance of L1 enhancements for inter-cell beam management | Huawei, HiSilicon |
| [**R1-2310849**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2310849.zip) | Maintenance of timing advance management to reduce latency | Huawei, HiSilicon |
| [**R1-2310954**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2310954.zip) | Maintenance on L1 enhancements for inter-cell beam management | ZTE |
| [**R1-2310955**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2310955.zip) | Maintenance on TA management to reduce latency | ZTE |
| [**R1-2310972**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2310972.zip) | Maintenance of L1 enhancements to inter-cell beam management | Ericsson |
| [**R1-2310973**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2310973.zip) | Maintenance of TA management for LTM | Ericsson |
| [**R1-2311034**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311034.zip) | FL plan on L1 enhancements for LTM at RAN1#115 | Moderator (Fujitsu) |
| [**R1-2311035**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311035.zip) | FL summary 1 on L1 enhancements for inter-cell beam management | Moderator (Fujitsu) |
| [**R1-2311036**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311036.zip) | FL summary 2 on L1 enhancements for inter-cell beam management | Moderator (Fujitsu) |
| [**R1-2311037**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311037.zip) | FL summary 3 on L1 enhancements for inter-cell beam management | Moderator (Fujitsu) |
| [**R1-2311038**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311038.zip) | Final FL summary on L1 enhancements for inter-cell beam management | Moderator (Fujitsu) |
| [**R1-2311053**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311053.zip) | Remaining issues on L1 enhancements for inter-cell beam management | Fujitsu |
| [**R1-2311105**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311105.zip) | Discussion on L1 enhancement for L1/L2-triggered Mobility | vivo |
| [**R1-2311106**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311106.zip) | Discussion on TA management for L1/L2-triggered Mobility | vivo |
| [**R1-2311172**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311172.zip) | Remaining issues on L1 enhancements for inter-cell beam management | Spreadtrum Communications |
| [**R1-2311173**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311173.zip) | Remaining issues on timing advance management to reduce latency | Spreadtrum Communications |
| [**R1-2311212**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311212.zip) | Remaining issues on L1 enhancement for LTM | Panasonic |
| [**R1-2311230**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311230.zip) | Remaining Issues of Inter-cell beam management enhancement | OPPO |
| [**R1-2311231**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311231.zip) | Remaining Issues of Timing Advance Management | OPPO |
| [**R1-2311350**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311350.zip) | Remaining issues on L1 enhancements for inter-cell beam management | CATT |
| [**R1-2311351**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311351.zip) | Remaining issues on TA management to reduce latency | CATT |
| [**R1-2311368**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311368.zip) | Remaining issues of L1 enhancements for inter-cell beam management | Lenovo |
| [**R1-2311369**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311369.zip) | Remaining issues of timing advance management for L1/L2 mobility | Lenovo |
| [**R1-2311409**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311409.zip) | Maintenance of L1 enhancements for inter-cell beam management | xiaomi |
| [**R1-2311439**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311439.zip) | Remaining issues on TA management for mobility | LG Electronics |
| [**R1-2311442**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311442.zip) | Maintenance on L1 enhancements for inter-cell beam management | Google |
| [**R1-2311443**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311443.zip) | Maintenance on timing advance management to reduce latency | Google |
| [**R1-2311490**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311490.zip) | Remaining issues on L1 enhancements for inter-cell beam management | CMCC |
| [**R1-2311491**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311491.zip) | Remaining issues on timing advance management to reduce latency | CMCC |
| [**R1-2311510**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311510.zip) | Remaining issues on L1 enhancements for inter-cell beam management | NEC |
| [**R1-2311514**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311514.zip) | Remaining issues on L1 enhancements for L1/L2-triggered Mobility | KDDI Corporation |
| [**R1-2311592**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311592.zip) | Remaining issues on TA management for LTM | FGI |
| [**R1-2311593**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311593.zip) | Discussion on L1 enhancements for inter-cell beam management | FGI |
| [**R1-2311629**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311629.zip) | Remaining issues on L1 enhancements for inter-cell mobility | NTT DOCOMO, INC. |
| [**R1-2311630**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311630.zip) | Remaining issues on TA enhancements for inter-cell mobility | NTT DOCOMO, INC. |
| [**R1-2311692**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311692.zip) | L1 enhancements for inter-cell beam management | Apple |
| [**R1-2311693**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311693.zip) | Timing advance management for L1/L2 Mobility | Apple |
| [**R1-2311852**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311852.zip) | Remaining details on L1 enhancements for inter-cell beam management | Samsung |
| [**R1-2311853**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311853.zip) | Remaining issues on candidate cell TA management for NR L1/L2 mobility enhancement | Samsung |
| [**R1-2311889**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311889.zip) | Remaining Issues on Layer-1 Enhancements for L1/L2-triggered Mobility | Nokia, Nokia Shanghai Bell |
| [**R1-2311890**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311890.zip) | Remaining Issues on Timing Advance Management for L1/L2-triggered Mobility | Nokia, Nokia Shanghai Bell |
| [**R1-2311934**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311934.zip) | Remaining issues on L1 enhancements for inter-cell beam management | Ruijie Network Co. Ltd |
| [**R1-2311951**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311951.zip) | Remaining issues on L1 enhancements | InterDigital, Inc. |
| [**R1-2311952**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311952.zip) | Remaining details on timing advance management | InterDigital, Inc. |
| [**R1-2311984**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2311984.zip) | Remaining issues on L1 enhancements for inter-cell beam management | MediaTek Inc. |
| [**R1-2312044**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312044.zip) | L1 Enhancements for Inter-Cell Beam Management | Qualcomm Incorporated |
| [**R1-2312045**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312045.zip) | TA management to reduce latency for L1/L2 based mobility | Qualcomm Incorporated |
| [**R1-2312134**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312134.zip) | Discussion on TA management to reduce latency | CAICT |
| [**R1-2312275**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312275.zip) | Maintenance of L1 enhancements to inter-cell beam management | Ericsson |
| [**R1-2312331**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312331.zip) | Moderator summary on timing advance management for LTM: Round 1 | Moderator (CATT) |
| [**R1-2312332**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312332.zip) | Moderator summary on timing advance management for LTM: Round 2 | Moderator (CATT) |
| [**R1-2312391**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312391.zip) | Summary of RRC parameters for NR mobility enhancement WI for RAN1 115 meeting | Rapporteur (Apple) |
| [**R1-2312442**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312442.zip) | Draft reply LS on L1 measurements in LTM | Moderator (Ericsson) |
| [**R1-2312443**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312443.zip) | Reply LS on L1 measurements in LTM | RAN1, Ericsson |
| [**R1-2312469**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312469.zip) | RRC parameters list update #1 for NR mobility enhancement WI | Rapporteur (Apple) |
| [**R1-2312506**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312506.zip) | Session notes for 8.7 (Maintenance on further NR mobility enhancements) | Ad-Hoc Chair (Huawei) |
| [**R1-2312542**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312542.zip) | Summary#2 of RRC parameters for NR mobility enhancement WI | Rapporteur (Apple) |
| [**R1-2312546**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312546.zip) | [draft] LS on MAC CE to activate/deactivate semi-persistent PUCCH report and activation/deactivation of activated TCI states of multiple candidate cells for LTM | Moderator (Fujitsu) |
| [**R1-2312547**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312547.zip) | [draft] LS on MAC CE to activate/deactivate semi-persistent PUCCH report for LTM | Moderator (Fujitsu) |
| [**R1-2312564**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312564.zip) | Moderator summary on timing advance management for LTM: Round 3 | Moderator (CATT) |
| [**R1-2312565**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312565.zip) | Moderator summary on timing advance management for LTM: Round 4 | Moderator (CATT) |
| [**R1-2312616**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312616.zip) | Summary#3 of RRC parameters for NR mobility enhancement WI | Rapporteur (Apple) |
| [**R1-2312642**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312642.zip) | LS on MAC CE to activate/deactivate semi-persistent PUCCH report for LTM | RAN1, Fujitsu |
| [**R1-2312678**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312678.zip) | Final FL summary on L1 enhancements for inter-cell beam management | Moderator (Fujitsu) |
| [**R1-2312679**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312679.zip) | Summary#4 of RRC parameters for NR mobility enhancement WI | Rapporteur (Apple) |
| [**R1-2312680**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_115/Docs/R1-2312680.zip) | RRC parameters list update #2 for NR mobility enhancement WI | Rapporteur (Apple) |

**RAN2#123bis (October 2023)**

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| [**R2-2309414**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309414.zip) | Reply LS on L1 measurements for LTM (R1-2308465; contact: Ericsson) | RAN1 |
| [**R2-2309426**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309426.zip) | LS on L1 measurement and TA management for LTM (R1-2308625; contact: CATT, Fujitsu, MediaTek) | RAN1 |
| [**R2-2309457**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309457.zip) | Reply LS on PDCCH order RACH on neighbour cell (R4-2314454; contact: CATT) | RAN4 |
| [**R2-2309458**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309458.zip) | Reply LS on beam application time and UE based TA measurement for LTM (R4-2314455; contact: Ericsson | RAN4 |
| [**R2-2309462**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309462.zip) | LS on improvement on FR2 SCell/SCG setup delay (R4-2314466; contact: Nokia) | RAN4 |
| [**R2-2309543**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309543.zip) | RRC Running CR for CHO with candidate SCGs | CATT |
| [**R2-2309544**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309544.zip) | RRC Open issue list for CHO with candidate SCGs | CATT |
| [**R2-2309545**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309545.zip) | Discussion on improvement of FR2 SCell/SCG setup delay | CATT |
| [**R2-2309546**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309546.zip) | Discussion on L2 Centric Parts | CATT |
| [**R2-2309547**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309547.zip) | Discussion on subsequent CPAC | CATT |
| [**R2-2309548**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309548.zip) | Rapporteur proposals to open issues on CHO with candidate SCGs | CATT, Huawei, HiSilicon, MediaTek, vivo, Lenovo, OPPO, ZTE Corporation, Sanechips |
| [**R2-2309575**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309575.zip) | Remaining aspects of Cell Switch | Lenovo |
| [**R2-2309580**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309580.zip) | L1 measurement report to support LTM | NEC |
| [**R2-2309581**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309581.zip) | RB Reconfig for MCG LTM and Clarification on SCG LTM | NEC |
| [**R2-2309582**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309582.zip) | Remaining issues for RACH less LTM cell switch | NEC |
| [**R2-2309710**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309710.zip) | Discussion on RRC centric open issues | LG Electronics |
| [**R2-2309711**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309711.zip) | Discussion on CFRA based LTM | LG Electronics |
| [**R2-2309712**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309712.zip) | Discussion on L2 centric open issues | LG Electronics |
| [**R2-2309713**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309713.zip) | Views on RACH-less fast recovery | KDDI Corporation |
| [**R2-2309719**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309719.zip) | Discussion on LTM procedures | vivo |
| [**R2-2309720**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309720.zip) | RRC configuration for LTM | vivo |
| [**R2-2309721**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309721.zip) | Contents of LTM MAC CE and other MAC related issue for LTM | vivo |
| [**R2-2309722**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309722.zip) | Remaining issues for subsequent CPAC | vivo |
| [**R2-2309723**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309723.zip) | Discussion on CHO with Candidate SCGs | vivo |
| [**R2-2309769**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309769.zip) | Cell Switching – Open Issues | Samsung Electronics Co., Ltd |
| [**R2-2309770**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309770.zip) | Early Timing Advance Management for LTM - Open Issues | Samsung Electronics Co., Ltd |
| [**R2-2309786**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309786.zip) | Support UE based TA determination and RACH-less LTM | Futurewei |
| [**R2-2309787**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309787.zip) | Configuration for UE based RACH-less LTM and sequential measurement | Futurewei |
| [**R2-2309788**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309788.zip) | Lower layer operation for UE based RACH-less LTM | Futurewei |
| [**R2-2309830**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309830.zip) | 37.340 running CR for introduction of NR further mobility enhancements | ZTE Corporation, Sanechips |
| [**R2-2309831**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309831.zip) | Summary of [Post123][054][feMob] Discussion on stage-2 signalling open issues | ZTE Corporation, Sanechips |
| [**R2-2309832**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309832.zip) | Open issue list on 37.340 running CR | ZTE Corporation, Sanechips |
| [**R2-2309833**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309833.zip) | Consideration on LTM in NR-DC | ZTE Corporation, Sanechips |
| [**R2-2309834**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309834.zip) | Remaining issues on LTM RRC | ZTE Corporation, Sanechips |
| [**R2-2309835**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309835.zip) | Remaining issues on subsequent CPAC | ZTE Corporation, Sanechips |
| [**R2-2309836**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309836.zip) | Remaining issues on CHO with candidate SCG(s) | ZTE Corporation, Sanechips |
| [**R2-2309851**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309851.zip) | Support of UE-based TA acquisition for LTM | Samsung |
| [**R2-2309852**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309852.zip) | Considerations on Subsequent CPAC after SCG Change | Samsung |
| [**R2-2309869**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309869.zip) | 38.321 running CR for introduction of NR further mobility enhancements | Huawei, HiSilicon |
| [**R2-2309870**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309870.zip) | Rapporteur proposals to address open issues in MAC running CRs (open issue list) | Huawei, HiSilicon |
| [**R2-2309871**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309871.zip) | Early TA acquisition and LTM MAC CE format | Huawei, HiSilicon |
| [**R2-2309872**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309872.zip) | Discussion on CHO with candidate SCG(s) | Huawei, HiSilicon |
| [**R2-2309881**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309881.zip) | Discussion on fallback RACH for L1L2-triggered mobility | ASUSTeK |
| [**R2-2309894**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309894.zip) | RAN2 aspects of RACH-based early TA acquisition | Fujitsu |
| [**R2-2309895**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309895.zip) | The completion of RACH-less LTM Cell switch | Fujitsu |
| [**R2-2309915**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309915.zip) | Discussion on RAN2 centric issues for LTM | CATT |
| [**R2-2309916**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309916.zip) | Discussion on L1 related issues for LTM | CATT |
| [**R2-2309981**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309981.zip) | Considerations on CHO with CPA/CPC | Samsung |
| [**R2-2309996**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2309996.zip) | Remaining issues to support PDCCH-ordered RACH for early TA acquisition | LG Electronics Inc. |
| [**R2-2310028**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310028.zip) | 38.306 running draftCR for introduction of NR further mobility enhancements | Intel Corporation |
| [**R2-2310029**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310029.zip) | 38.331 running draftCR for UE capability of NR further mobility enhancements | Intel Corporation |
| [**R2-2310033**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310033.zip) | Discussion on L2/3 UE capabilities for NR further mobility enhancements | Intel Corporation |
| [**R2-2310099**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310099.zip) | Some views On Remaining L2 centric issues for LTM | ZTE Corporation, Sanechips |
| [**R2-2310100**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310100.zip) | Further Discussion on RACH-less LTM | ZTE Corporation, Sanechips |
| [**R2-2310224**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310224.zip) | Discussion on open issues of CHO with candidate SCGs | China Telecom |
| [**R2-2310264**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310264.zip) | Discussion on CHO with candidate SCGs | CMCC |
| [**R2-2310268**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310268.zip) | Discussion on remaining open issues for subsequent CPAC | CMCC |
| [**R2-2310277**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310277.zip) | Discussions on LTM open issues | CMCC |
| [**R2-2310278**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310278.zip) | Discussions on LTM related measurements | CMCC |
| [**R2-2310279**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310279.zip) | Considerations on L2 centric parts | CMCC |
| [**R2-2310326**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310326.zip) | Discussion on Subsequent CPAC | Apple |
| [**R2-2310327**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310327.zip) | RSTD based early TA acquisition | Apple |
| [**R2-2310337**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310337.zip) | UE reporting of sk-counter for S-CPAC | Apple |
| [**R2-2310338**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310338.zip) | On closing L2 centric open issues in LTM | Apple |
| [**R2-2310339**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310339.zip) | CFRA and CG configuration aspects in LTM | Apple |
| [**R2-2310360**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310360.zip) | 38.300 running CR for introduction of NR further mobility enhancements | MediaTek Inc., vivo |
| [**R2-2310371**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310371.zip) | Discussion on RRC open issues for LTM | OPPO |
| [**R2-2310372**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310372.zip) | Discussion on SCG LTM | OPPO |
| [**R2-2310373**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310373.zip) | Discussion on L2-centric issues for LTM | OPPO |
| [**R2-2310374**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310374.zip) | Discussion on TCI state related issues for LTM | OPPO |
| [**R2-2310375**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310375.zip) | RRC running CR for subsequent CPAC in NR-DC | OPPO |
| [**R2-2310376**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310376.zip) | RRC open issues list for subsequent CPAC in NR-DC | OPPO |
| [**R2-2310377**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310377.zip) | Discussion on open issues for subsequent CPAC in NR-DC | OPPO |
| [**R2-2310378**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310378.zip) | Discussion on open issues for CHO with candidate SCGs | OPPO |
| [**R2-2310398**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310398.zip) | Remaining issue on LTM cell switch procedure | Fujitsu |
| [**R2-2310399**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310399.zip) | L3 handover with LTM configuration | Fujitsu |
| [**R2-2310400**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310400.zip) | Failure detection and fast recovery | Fujitsu |
| [**R2-2310481**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310481.zip) | Discussion on fast SCell/SCG setup | CMCC, Ericsson, ZTE, Huawei, vivo |
| [**R2-2310535**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310535.zip) | Discussion on fast Scell setup | vivo |
| [**R2-2310573**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310573.zip) | Discussion on the evaluation adjustment for SCPAC | ITRI |
| [**R2-2310579**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310579.zip) | Remaining issues of RRC configured Layer-2 reset | Xiaomi |
| [**R2-2310580**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310580.zip) | RACH-less LTM and early TA | Xiaomi |
| [**R2-2310581**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310581.zip) | Remaining issues for RACH-based LTM | Xiaomi |
| [**R2-2310619**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310619.zip) | Discussion on RRC aspects for L1/L2-Triggered Mobility | Xiaomi |
| [**R2-2310620**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310620.zip) | Discussion on subsequent CPAC | Xiaomi |
| [**R2-2310621**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310621.zip) | Discussion on CHO with candidate SCG(s) | Xiaomi |
| [**R2-2310633**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310633.zip) | On Failure Handling for Rel-18 LTM | Nokia, Nokia Shanghai Bell |
| [**R2-2310634**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310634.zip) | On SCG Release in Rel-18 LTM | Nokia, Nokia Shanghai Bell |
| [**R2-2310635**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310635.zip) | Final details on CHO with CPAC in Rel-18 | Nokia, Nokia Shanghai Bell |
| [**R2-2310646**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310646.zip) | Discussion on L2 centric part of LTM | NEC |
| [**R2-2310647**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310647.zip) | Discussion on subsequent CPAC | NEC |
| [**R2-2310763**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310763.zip) | RACH-less solution and TA indication for LTM | Sony |
| [**R2-2310796**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310796.zip) | eEMR SCell setup delay | Nokia, Nokia Shanghai Bell |
| [**R2-2310801**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310801.zip) | Improvement on Scell/SCG setup/resume delay | Interdigital, Inc. |
| [**R2-2310802**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310802.zip) | Coexistence of LTM and L3M/CHO | Interdigital, Inc. |
| [**R2-2310803**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310803.zip) | Fast RLF for LTM execution | Interdigital, Inc. |
| [**R2-2310804**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310804.zip) | TA indication | Interdigital, Inc. |
| [**R2-2310873**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310873.zip) | Discussion on subsequent CPAC | MediaTek Inc. |
| [**R2-2310885**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310885.zip) | RRC running CR for LTM | Ericsson |
| [**R2-2310886**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310886.zip) | RRC open issues list for LTM | Ericsson |
| [**R2-2310887**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310887.zip) | Discussion of remaining RRC open issues for LTM | Ericsson |
| [**R2-2310888**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310888.zip) | Early sync and L1 measurements | Ericsson |
| [**R2-2310889**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310889.zip) | Remaining MAC issues | Ericsson |
| [**R2-2310890**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310890.zip) | Discussion on subsequent CPAC | Ericsson |
| [**R2-2310891**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310891.zip) | CHO with associated CPC or CPA | Ericsson |
| [**R2-2310892**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310892.zip) | Discussion on early measurements enhancements | Ericsson, CMCC |
| [**R2-2310987**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310987.zip) | Open issues regarding subsequent CPAC | Interdigital Inc. |
| [**R2-2310988**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310988.zip) | Open issues regarding CHO with associated SCG | Interdigital Inc. |
| [**R2-2310999**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2310999.zip) | RRC aspects for LTM | Huawei, HiSilicon |
| [**R2-2311000**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311000.zip) | UE capability for LTM and leftover stage 2 issues | Huawei, HiSilicon |
| [**R2-2311001**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311001.zip) | RACH-less LTM | Huawei, HiSilicon |
| [**R2-2311002**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311002.zip) | Subsequent CPAC | Huawei, HiSilicon |
| [**R2-2311078**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311078.zip) | RAN2 signaling for improvement to SCellSCG setup delay | LG Electronics |
| [**R2-2311082**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311082.zip) | On CHO recovery for CHO with candidate SCG | MediaTek Inc. |
| [**R2-2311096**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311096.zip) | Stage 2 and 3 issues for Subsequent CPC | LG Electronics Inc. |
| [**R2-2311097**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311097.zip) | Simultaneous Execution of CHO and CPAC | LG Electronics Inc. |
| [**R2-2311113**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311113.zip) | Discussion on FR2 SCell/SCG setup delay | MediaTek Inc. |
| [**R2-2311124**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311124.zip) | Remaining issues for RRC Aspects of LTM | SHARP Corporation |
| [**R2-2311145**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311145.zip) | Remaining issues for Early TA acquisition of RACH-less LTM | Sharp |
| [**R2-2311146**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311146.zip) | Remaining issues for L2 centric parts of LTM | Sharp |
| [**R2-2311147**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311147.zip) | Remaining issues for security aspects of Subsequent CPAC | Sharp |
| [**R2-2311148**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311148.zip) | Discussion on subsequent CPAC | Sharp |
| [**R2-2311195**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311195.zip) | Discussion on NR-DC with subsequent CPAC. | DENSO CORPORATION |
| [**R2-2311210**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311210.zip) | LTM Cell Switch Aspects | Nokia, Nokia Shanghai Bell |
| [**R2-2311211**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311211.zip) | On bearer handling in LTM | Nokia, Nokia Shanghai Bell |
| [**R2-2311249**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311249.zip) | Rapporteur proposals to open issues on CHO with candidate SCGs | CATT, Huawei, HiSilicon, MediaTek, vivo, Lenovo, OPPO, ZTE Corporation, Sanechips, Nokia, Nokia Shanghai Bell |
| [**R2-2311250**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311250.zip) | Rapporteur proposals to address open issues in MAC running CRs (open issue list) | Huawei, HiSilicon |
| [**R2-2311283**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311283.zip) | [AT123bis][505][feMob] LTM RRC | Ericsson |
| [**R2-2311330**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311330.zip) | Summary of [AT123bis][511][feMob] Stage-2 TP for Early Synchronization(MTK) | MediaTek Inc. |
| [**R2-2311331**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311331.zip) | LS on RAN2 progress on subsequent CPAC | RAN2 |
| [**R2-2311332**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311332.zip) | LS on CSI resource configuration and on early RACH for LTM | RAN2 |
| [**R2-2311333**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311333.zip) | LS on L1 measurements for LTM | RAN2 |
| [**R2-2311532**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311532.zip) | Report of [AT123bis][504][feMob] open issues on CHO with candidate SCGs (CATT) | CATT |
| [**R2-2311533**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311533.zip) | [DRAFT] LS on L1 measurements for LTM | Ericsson |
| [**R2-2311535**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311535.zip) | [DRAFT] LS on RAN2 progress on subsequent CPAC | ZTE Corporation, Sanechips |
| [**R2-2311538**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311538.zip) | Rapporteur summary [[AT123bis][503][feMob] subsequent CPAC security issues (Nokia) | Nokia, Nokia Shanghai Bell |
| [**R2-2311574**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311574.zip) | Summary of [AT123bis][514][feMob] LTM MAC Related Open Issues | Huawei, HiSilicon |
| [**R2-2311576**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311576.zip) | LS on CSI resource configuration and on early RACH for LTM | Huawei |
| R2-2311595 | 38.321 running CR for introduction of NR further mobility enhancements | Huawei, HiSilicon |
| [**R2-2311602**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311602.zip) | RRC running CR for CHO with candidate SCG(s) | CATT |
| [**R2-2311603**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311603.zip) | RRC Open issue list for CHO with candidate SCGs | CATT |
| [**R2-2311605**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311605.zip) | RRC running CR for subsequent CPAC in NR-DC | OPPO |
| [**R2-2311606**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311606.zip) | RRC open issues list for LTM | Ericsson |
| [**R2-2311607**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311607.zip) | Reply LS on security for selective SCG activation | RAN2 |
| [**R2-2311610**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311610.zip) | 38.300 running CR for introduction of NR further mobility enhancements | MediaTek Inc., vivo |
| [**R2-2311618**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_123bis/Docs/R2-2311618.zip) | Reply LS on security for selective SCG activation | RAN2 |

**RAN2#124 (November 2023)**

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| [**R2-2311742**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311742.zip) | Reply LS on beam application time for LTM (R4-2317331; contact: Ericsson) | RAN4 |
| [**R2-2311749**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311749.zip) | LS on improvement on FR2 SCell/SCG setup delay (R4-2317428; contact: Nokia) | RAN4 |
| [**R2-2311818**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311818.zip) | Remaining issues for SCG LTM | NEC |
| [**R2-2311819**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311819.zip) | Failure Handling for LTM | NEC |
| [**R2-2311826**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311826.zip) | Cell Switching - CFRA,TA and RACH-less LTM completion Aspects | Samsung Electronics Co., Ltd |
| [**R2-2311827**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311827.zip) | Early Timing Advance Management – LBT Failure Handling | Samsung Electronics Co., Ltd |
| [**R2-2311890**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311890.zip) | Fast cell recovery aspects for LTM failures | Panasonic |
| [**R2-2311898**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311898.zip) | Discussion on early TA acquisition | vivo |
| [**R2-2311899**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311899.zip) | Discussion on RRC open issues for LTM | vivo |
| [**R2-2311900**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311900.zip) | Security issues for LTM cell switch command | vivo |
| [**R2-2311901**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311901.zip) | Remaining issues for subsequent CPAC | vivo |
| [**R2-2311902**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311902.zip) | Discussion on L2 centric open issue for LTM | vivo |
| [**R2-2311932**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311932.zip) | Discussion on remaining issues of subsequent CPAC | Samsung R&D Institute UK |
| R2-2311935 | Discussion on co-existence of LTM and CHO fast recovery | NTT DOCOMO, INC. |
| [**R2-2311937**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311937.zip) | Discussion on L2 Centric Parts | CATT |
| [**R2-2311938**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311938.zip) | Discussion on subsequent CPAC | CATT |
| [**R2-2311939**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311939.zip) | Rapporteur proposals to open issues on CHO with candidate SCGs | CATT, Huawei, HiSilicon, MediaTek, OPPO, ZTE Corporation, Sanechips, Fujitsu, vivo, Nokia, Nokia Shanghai Bell |
| [**R2-2311940**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311940.zip) | Discussion on improvement on Scell SCG setup delay | CATT |
| [**R2-2311986**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311986.zip) | Discussions on CHO with candidate SCGs | KDDI Corporation |
| [**R2-2311988**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2311988.zip) | Draft LS on RAN2 progress on CHO with candidate SCGs | CATT |
| [**R2-2312000**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312000.zip) | Co-existence between LTM and other features | Fujitsu |
| [**R2-2312001**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312001.zip) | RAN2 aspects of RACH-based early TA acquisition | Fujitsu |
| [**R2-2312002**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312002.zip) | LTM cell switch execution and completion | Fujitsu |
| [**R2-2312031**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312031.zip) | Remaining issues on candidate cell TCI state activation | Panasonic |
| [**R2-2312042**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312042.zip) | Discussion on RRC aspects for LTM | CATT |
| [**R2-2312131**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312131.zip) | Configuration of UE based TA determination for RACH-less LTM | Futurewei |
| [**R2-2312132**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312132.zip) | Remaining MAC issues for UE based RACH-less LTM | Futurewei |
| [**R2-2312151**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312151.zip) | 38.306 running draftCR for introduction of NR further mobility enhancements | Intel Corporation |
| [**R2-2312152**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312152.zip) | 38.331 running draftCR for introduction of NR further mobility enhancements | Intel Corporation |
| [**R2-2312153**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312153.zip) | Discussion and TP on L2/3 UE capabilities for NR further mobility enhancements | Intel Corporation |
| [**R2-2312170**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312170.zip) | Further details of subsequent CPAC configurations | NEC |
| [**R2-2312171**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312171.zip) | Remaining issues on security handling in SCPAC | NEC |
| [**R2-2312201**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312201.zip) | CHO with multiple candidate SCGs | Qualcomm Incorporated |
| [**R2-2312202**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312202.zip) | Subsequent CPAC in NR-DC | Qualcomm Incorporated |
| [**R2-2312212**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312212.zip) | MAC aspects of LTM | Qualcomm Incorporated |
| [**R2-2312213**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312213.zip) | RRC configuration aspects for LTM | Qualcomm Incorporated |
| [**R2-2312214**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312214.zip) | RRC-related LTM procedures | Qualcomm Incorporated |
| [**R2-2312223**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312223.zip) | Discussion on co-existence of LTM and CHO fast recovery | NTT DOCOMO, INC. |
| [**R2-2312235**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312235.zip) | 37.340 running CR for introduction of NR further mobility enhancements | ZTE Corporation, Sanechips |
| [**R2-2312236**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312236.zip) | Stage-2 TP for SCG LTM procedure | ZTE Corporation, Sanechips |
| [**R2-2312237**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312237.zip) | Remaining issues on LTM RRC | ZTE Corporation, Sanechips |
| [**R2-2312238**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312238.zip) | Discussion on RRC centric open issues for subsequent CPAC | ZTE Corporation, Sanechips |
| [**R2-2312239**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312239.zip) | Remaining issues on CHO with candidate SCG(s) | ZTE Corporation, Sanechips |
| [**R2-2312274**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312274.zip) | discussion on subsequent CPAC | Sharp |
| [**R2-2312357**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312357.zip) | RSTD based early TA acquisition | Apple |
| [**R2-2312358**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312358.zip) | LTM procedure completion at the UE in SCG | Apple |
| [**R2-2312373**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312373.zip) | Consideration on co-existence of LTM and CHO | Samsung |
| [**R2-2312393**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312393.zip) | DRX and measurement gap impact for PDCCH monitoring of RACH-less LTM | NEC |
| [**R2-2312394**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312394.zip) | Remaining issue of subsequent CPAC | NEC |
| [**R2-2312398**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312398.zip) | Remaining Issues for Subsequent CPAC | FGI |
| [**R2-2312399**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312399.zip) | Remaining Issues for CHO including target MCG and candidate SCGs | FGI |
| [**R2-2312404**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312404.zip) | Views on RACH-less fast recovery | KDDI Corporation |
| [**R2-2312410**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312410.zip) | Introduction of NR further mobility enhancements in TS 38.321 | Huawei, HiSilicon |
| [**R2-2312411**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312411.zip) | Rapporteur proposals to address open issues in MAC running CR | Huawei, HiSilicon |
| [**R2-2312412**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312412.zip) | TCI state in LTM cell switch MAC CE used in RACH | Huawei, HiSilicon |
| [**R2-2312413**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312413.zip) | Discussion on CHO with candidate SCG(s) | Huawei, HiSilicon |
| [**R2-2312420**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312420.zip) | Discussion on RRC open issues | LG Electronics |
| [**R2-2312421**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312421.zip) | Discussion on SCG LTM and other | LG Electronics |
| [**R2-2312480**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312480.zip) | Discussion on UE measured TA ID and No reset ID | Lenovo |
| [**R2-2312481**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312481.zip) | Analysis on SCG LTM | Lenovo |
| [**R2-2312482**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312482.zip) | Discussion on CHO with candidate SCG | Lenovo |
| [**R2-2312483**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312483.zip) | Left issues on subsequent CPAC | Lenovo |
| [**R2-2312490**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312490.zip) | Discussion on TCI state related issues | OPPO |
| [**R2-2312491**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312491.zip) | Discussion on SCG LTM | OPPO |
| [**R2-2312492**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312492.zip) | Discussion on early sync and RACH-less LTM | OPPO |
| [**R2-2312493**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312493.zip) | Discussion on cross-feature issues for LTM | OPPO |
| [**R2-2312494**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312494.zip) | Discussion on the open issues for subsequent CPAC | OPPO |
| [**R2-2312495**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312495.zip) | Discussion on improvement to SCell/SCG setup delay | OPPO |
| [**R2-2312501**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312501.zip) | Remaining issues for RRC Aspects of LTM | Sharp |
| [**R2-2312502**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312502.zip) | Remaining issues for L2 centric parts of LTM | Sharp |
| [**R2-2312504**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312504.zip) | UE Capability for LTM | MediaTek Inc. |
| [**R2-2312505**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312505.zip) | TCI State Handling in LTM | MediaTek Inc. |
| [**R2-2312513**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312513.zip) | Discussion on NR-DC with subsequent CPAC. | DENSO CORPORATION |
| [**R2-2312544**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312544.zip) | Issues with Timer T304 handling (including TP) | Lenovo |
| [**R2-2312548**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312548.zip) | Discussion on SCG failure handling with subsequent CPAC | ITRI |
| [**R2-2312628**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312628.zip) | Handling of configured grant for LTM cell switch | Transsion Holdings |
| [**R2-2312629**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312629.zip) | Discussion on UE based TA measurement | Transsion Holdings |
| [**R2-2312630**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312630.zip) | Discussion on Selective Activation of Cell Groups in NR-DC | Transsion Holdings |
| [**R2-2312679**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312679.zip) | Considerations on LTM open issues | CMCC |
| [**R2-2312680**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312680.zip) | Discussions on LTM related measurements | CMCC |
| [**R2-2312681**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312681.zip) | Discussion on CHO with candidate SCGs | CMCC |
| [**R2-2312682**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312682.zip) | Discussion on fast SCell/SCG setup | CMCC, Ericsson, ZTE, Huawei, vivo |
| [**R2-2312711**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312711.zip) | Discussion on open issues for subsequent CPAC procedure | ZTE Corporation, Sanechips |
| [**R2-2312720**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312720.zip) | 38.300 running CR for introduction of NR further mobility enhancements | MediaTek Inc., vivo |
| [**R2-2312736**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312736.zip) | Considerations on CHO with CPA/CPC | Samsung |
| [**R2-2312777**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312777.zip) | Remaining issues on subsequent CPAC | InterDigital Inc. |
| [**R2-2312782**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312782.zip) | Further Discussion on L2 Centric Part of LTM | ZTE Corporation, Sanechips |
| [**R2-2312830**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312830.zip) | Discussion on subsequent CPAC | Ericsson |
| [**R2-2312831**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312831.zip) | CHO with associated CPC or CPA | Ericsson |
| [**R2-2312832**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312832.zip) | Discussion on early measurements enhancements | Ericsson, CMCC |
| [**R2-2312859**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312859.zip) | On remaining issues for SCPAC | Nokia, Nokia Shanghai Bell |
| [**R2-2312874**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312874.zip) | Improvement on Scell/SCG setup/resume delay using LTM | Interdigital, Inc. |
| [**R2-2312875**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312875.zip) | Coexistence of LTM and L3M/CHO | Interdigital, Inc. |
| [**R2-2312876**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312876.zip) | Fast RLF for LTM execution | Interdigital, Inc. |
| [**R2-2312877**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312877.zip) | UE based TA determination configuration | Interdigital, Inc. |
| [**R2-2312916**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312916.zip) | Discussion on RRC aspects of LTM | Samsung |
| [**R2-2312931**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312931.zip) | Remaining issues on CHO with candidate SCG | InterDigital Inc. |
| [**R2-2312985**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312985.zip) | Introduction of further NR mobility enhancements | Ericsson, OPPO, CATT |
| [**R2-2312986**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312986.zip) | Open issues and resolution proposals on the RRC merging issues | Ericsson |
| [**R2-2312987**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312987.zip) | RRC open issues list | Ericsson |
| [**R2-2312988**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312988.zip) | Discussion of remaining RRC open issues for LTM | Ericsson |
| [**R2-2312989**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312989.zip) | Co-existence of LTM with other mobility features | Ericsson |
| [**R2-2312990**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2312990.zip) | Remaining MAC issues | Ericsson |
| [**R2-2313047**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313047.zip) | Discussion on MAC open issues to support LTM | LG Electronics Inc. |
| [**R2-2313048**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313048.zip) | On RRC Aspects of LTM and L3 Mobility Interworking | Nokia, Nokia Shanghai Bell |
| [**R2-2313049**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313049.zip) | On how to address open issues for CHO with CPAC in Rel-18 | Nokia, Nokia Shanghai Bell |
| [**R2-2313066**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313066.zip) | Stage 3 issues for Subsequent CPAC | LG Electronics |
| [**R2-2313067**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313067.zip) | CHO with candidate SCG | LG Electronics |
| [**R2-2313167**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313167.zip) | RRC open issues for LTM | Xiaomi |
| [**R2-2313168**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313168.zip) | Remaining issues for subsequent CPAC | Xiaomi |
| [**R2-2313169**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313169.zip) | Remaining issues for CHO with candidate SCG(s) | Xiaomi |
| [**R2-2313170**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313170.zip) | Discussion on improvement to SCell/SCG setup delay | Xiaomi |
| [**R2-2313187**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313187.zip) | Discussion on LTM candidate configuration for different CGs | ASUSTeK |
| [**R2-2313188**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313188.zip) | Discussion on fallback RACH for L1L2-triggered mobility | ASUSTeK |
| [**R2-2313189**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313189.zip) | Discussion on LTM Cell Switch Command MAC CE format | ASUSTeK |
| [**R2-2313307**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313307.zip) | Early measurement report enhancement | LG Electronics |
| [**R2-2313310**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313310.zip) | Keystream reuse issue caused by fast recovery after LTM cell switch | Fujitsu, CATT |
| [**R2-2313311**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313311.zip) | Radio bearer release/add upon LTM cell switch procedure | Fujitsu |
| [**R2-2313312**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313312.zip) | L3 handover with LTM configuration | Fujitsu |
| [**R2-2313363**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313363.zip) | On UE Capabilities for LTM | Nokia, Nokia Shanghai Bell |
| [**R2-2313364**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313364.zip) | On Cell Switch and TA Acquisition Aspects | Nokia, Nokia Shanghai Bell |
| [**R2-2313365**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313365.zip) | RRC Aspects of LTM with Dual Connectivity | Nokia, Nokia Shanghai Bell |
| [**R2-2313384**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313384.zip) | Remaining issues of RRC configured Layer-2 reset | Xiaomi |
| [**R2-2313385**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313385.zip) | Remaining issues of RACH-less solution | Xiaomi |
| [**R2-2313407**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313407.zip) | Discussion on eEMR SCell setup delay | vivo |
| [**R2-2313410**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313410.zip) | Discussion on SCell/SCG setup delay | MediaTek Inc. |
| [**R2-2313489**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313489.zip) | On Cell Switch and TA Acquisition Aspects | Nokia, Nokia Shanghai Bell |
| [**R2-2313494**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313494.zip) | Email Discussion report on [Post123bis][551][feMob] eEMR SCell setup delay (Nokia) | Nokia, Nokia Shanghai Bell |
| [**R2-2313495**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313495.zip) | eEMR SCell setup delay | Nokia, Nokia Shanghai Bell |
| [**R2-2313520**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313520.zip) | RRC aspects for LTM | Huawei, HiSilicon |
| [**R2-2313521**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313521.zip) | LTM UE capabilities, LTM cross-WI combinations and EMR scope | Huawei, HiSilicon |
| [**R2-2313522**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313522.zip) | RACH-less LTM cell switch | Huawei, HiSilicon |
| [**R2-2313523**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313523.zip) | Subsequent CPAC | Huawei, HiSilicon |
| [**R2-2313558**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313558.zip) | Rapporteur proposals to address open issues in MAC running CR | Huawei, HiSilicon |
| [**R2-2313590**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313590.zip) | Discussion and TP on L2/3 UE capabilities for NR further mobility enhancements | Intel Corporation |
| [**R2-2313596**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313596.zip) | Reply LS on Security Solution for Selective SCG (S3-235051; contact: Nokia) | SA3 |
| [**R2-2313662**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313662.zip) | Report of [AT124][501][feMob] eEMR SCell setup delay (Nokia) | Nokia (Rapporteur) |
| [**R2-2313663**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313663.zip) | CR for capturing eEMR | Nokia, Nokia Shanghai Bell |
| [**R2-2313664**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313664.zip) | Report of [AT124][502][feMob] Subsequent CPAC RRC Open Issues (OPPO) | OPPO |
| [**R2-2313665**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313665.zip) | Rapporteur summary [AT124][504][feMob] SCPAC Security (Nokia) | Nokia, Nokia Shanghai Bell |
| [**R2-2313666**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313666.zip) | Report of [AT124][503][feMob] Stage-2 SCPAC (ZTE) | ZTE Corporation, Sanechips |
| [**R2-2313667**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313667.zip) | [DRAFT] LS on RAN2 progress on subsequent CPAC | ZTE Corporation, Sanechips |
| [**R2-2313670**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313670.zip) | LS on RAN2 progress on CHO with candidate SCGs | RAN2 |
| [**R2-2313830**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313830.zip) | LTM UE capabilities, LTM cross-WI combinations and EMR scope | Huawei, HiSilicon |
| [**R2-2313883**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313883.zip) | LS on FR2 SCell/SCG setup delay improvement (R4-2321347; contact: Apple) | RAN4 |
| [**R2-2313906**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313906.zip) | Summary of [AT124][509][feMob] LTM L2 Centric | Huawei, HiSilicon |
| [**R2-2313916**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313916.zip) | Report of [AT124][510][feMob] CHO with candidate SCGs (CATT) | CATT |
| [**R2-2313917**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313917.zip) | [DRAFT] LS on RAN2 progress on CHO with candidate SCGs | CATT |
| [**R2-2313945**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313945.zip) | Reply LS on subsequent CPAC (R3-237949; contact: ZTE) | RAN3 |
| [**R2-2313955**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_124/Docs/R2-2313955.zip) | LS on early RACH for LTM | RAN2 |
| R2-2313969 | LS on RAN2 progress on subsequent CPAC | RAN2 |

**RAN3 #121bis (August 2023)**

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| [**R3-235008**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235008.zip) | LS on L1 measurement and TA management for LTM | RAN1(Fujitsu, Mediatek) |
| [**R3-235014**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235014.zip) | Reply LS to R3-230889 on Approaches during execution for inter-DU LTM | RAN2(Ericsson) |
| [**R3-235015**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235015.zip) | Reply LS on security for selective SCG activation | RAN2(Nokia) |
| [**R3-235016**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235016.zip) | LS on RAN2 progress on LTM | RAN2(Huawei) |
| [**R3-235019**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235019.zip) | Reply LS on beam application time and UE based TA measurement for LTM | RAN4(Ericsson) |
| [**R3-235040**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235040.zip) | (TP to BL CR TS 38.401) L1/2 Triggered Mobility (LTM) Procedures | Nokia, Nokia Shanghai Bell |
| [**R3-235041**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235041.zip) | (TPs to BL CRs for TS 38.473 and TS 38.423) On Reference Configuration and SCG Release for L1/2 Triggered Mobility (LTM) | Nokia, Nokia Shanghai Bell |
| [**R3-235064**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235064.zip) | (BL CR to 37.340) Introduction of subsequent CPAC | ZTE, China Telecom, Huawei, China Unicom, LG Electronics, Samsung, Ericsson |
| [**R3-235089**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235089.zip) | (BL CR to 37.340) Introduction of CHO with SCG(s) | CATT |
| [**R3-235090**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235090.zip) | (BL CR to 38.401) for L1L2Mob | Huawei, Ericsson, Nokia, Nokia Shanghai Bell, ZTE |
| [**R3-235091**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235091.zip) | (BL CR to TS 38.423) Introduction of Subsequent CPAC | Huawei, ZTE |
| [**R3-235092**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235092.zip) | (BL CR to 38.473) Additions for L1/L2 triggered mobility | Ericsson, Huawei, Nokia, Nokia Shanghai Bell, Intel Corporation, ZTE |
| [**R3-235119**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235119.zip) | (BL CR to 38.423) Introduction of CHO with SCG(s) | Lenovo, Ericsson, Huawei, Nokia, Nokia Shanghai Bell |
| [**R3-235135**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235135.zip) | Discussion about candidate cell RS configuration | CATT |
| [**R3-235136**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235136.zip) | (TP for 38.473 BLCR) Left issues remaining in LTM | CATT |
| [**R3-235152**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235152.zip) | (TP for CHO with NR-DC to TS 38.423, TS37.340): Avoid Multiple Data forwarding Path | ZTE |
| [**R3-235153**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235153.zip) | (TP for CHO with NR-DC to TS 38.423, TS37.340): CHO with multiple SCG | ZTE |
| [**R3-235160**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235160.zip) | [TPs to TS38423, TS37483 and TS37340, CHO with MRDC] Continuation of the discussions on enhancements for CHO with MR-DC | Nokia, Nokia Shanghai Bell |
| [**R3-235161**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235161.zip) | Further development of the S-CPAC solution | Nokia, Nokia Shanghai Bell |
| [**R3-235164**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235164.zip) | Discussion on L1 measurement reporting configuration in Inter-DU LTM | LG Electronics Inc. |
| [**R3-235165**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235165.zip) | (TP to BL CR for TS 38.423) Discussion on signaling support for CHO with SCGs | LG Electronics Inc. |
| [**R3-235166**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235166.zip) | (TP to BL CR for TS 38.423) Completion for the avoidance of multiple data forwarding paths | LG Electronics Inc. |
| [**R3-235167**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235167.zip) | (TP to BL CR for TS 38.423) Discussion on subsequent CPAC | LG Electronics Inc. |
| [**R3-235177**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235177.zip) | (TP to Mob\_enh2 BL CR TS 38.473) Discussion on L1/L2 based Inter-cell Mobility | Samsung |
| [**R3-235181**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235181.zip) | (TPs to CHO with SCG BL CRs of TS 37.340 and TS 38.423) support of CHO with SCGs | Huawei |
| [**R3-235182**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235182.zip) | (TP to subsequent CPAC TS 38.423 BL CR) support of subsequent CPAC | Huawei |
| [**R3-235247**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235247.zip) | Discussion on L1L2 based inter-cell mobility | Lenovo |
| [**R3-235248**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235248.zip) | (TPs to TS 38.401 BLCR & TS 38.470) Support of L1/L2 based inter-cell mobility | Lenovo |
| [**R3-235249**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235249.zip) | (TP to TS 38.423 BLCR) CHO in NR-DC | Lenovo |
| [**R3-235250**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235250.zip) | (TP for BLCR TS 38.423) Miscellaneous issues on CHO with multiple SCGs | Lenovo, Nokia, Nokia Shanghai Bell, Ericsson, NEC, Huawei, LG Electronics, ZTE |
| [**R3-235251**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235251.zip) | (TP for BLCR TS 38.473) On Subsequent CPAC | Lenovo |
| [**R3-235263**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235263.zip) | CHO with multiple candidate SCGs | Qualcomm Incorporated |
| [**R3-235264**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235264.zip) | Signalling Support for LTM | Qualcomm Incorporated |
| [**R3-235265**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235265.zip) | Subsequent CPAC in NR-DC | Qualcomm Incorporated |
| [**R3-235266**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235266.zip) | (TP for LTM BL CR to TS 38.401) Solutions for LTM | Ericsson |
| [**R3-235267**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235267.zip) | (TP for LTM BL CR to TS 38.473) F1AP impacts for LTM | Ericsson |
| [**R3-235268**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235268.zip) | (TP to TS 38.423 BL CR) CHO with candidate SCG(s) | Ericsson |
| [**R3-235269**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235269.zip) | (TP to TS 38.423 BL CR) Subsequent CPAC | Ericsson |
| [**R3-235283**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235283.zip) | (TP to TS38.473 on LTM) Rel-18 LTM Configuration ID and other | NEC |
| [**R3-235284**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235284.zip) | (TP to TS38.401 on LTM) Informing of other candidate Cell(s) in other candidate gNB-DU(s) to candidate gNB-DU | NEC |
| [**R3-235285**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235285.zip) | Discussion S-CPAC remaining issues (handling of S-SN, data forwarding, container for reference configuration) | NEC |
| [**R3-235286**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235286.zip) | (TP to TS 38.423 on S-CPAC) S-CPAC related handling of S-SN, Data Forwarding, container for Reference Configuration | NEC |
| [**R3-235332**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235332.zip) | (TP to BLCR TS38.423) Considerations on CHO in NR-DC | Samsung |
| [**R3-235333**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235333.zip) | Discussion on selective activation of the cell groups | Samsung |
| [**R3-235341**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235341.zip) | (TP for L1L2Mob BLCR for TS 38.401): Discussion on LTM procedures | Huawei |
| [**R3-235342**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235342.zip) | (TP for L1L2Mob BLCR for TS 38.473): LTM procedure design | Huawei |
| [**R3-235349**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235349.zip) | TP to BLCR for 38.423 on CHO with SCG and multiple SCGs | CATT |
| [**R3-235350**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235350.zip) | Discussion on subsequent CPAC | CATT |
| [**R3-235368**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235368.zip) | Resource management at gNB-DU for LTM | Rakuten Symphony |
| [**R3-235369**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235369.zip) | (TPs for Subsequent CPAC BLCR for TS 38.423 & TS 38.473) Reference SCG configuration | Google Inc. |
| [**R3-235370**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235370.zip) | (TP for L1L2Mob BLCR for TS 38.401) Reference configuration and Target Configuration ID in LTM | Google Inc. |
| [**R3-235371**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235371.zip) | (TP for L1L2Mob BLCR for TS 38.473) Reference configuration and Target Configuration ID in LTM | Google Inc. |
| [**R3-235372**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235372.zip) | (TP for L1L2Mob BL CR for TS 38.473) UE Context identification after successful cell switch | Google Inc. |
| [**R3-235375**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235375.zip) | (TP for LTM BL CR to TS 38.401) Discussion on L1L2 triggered mobility | ZTE |
| [**R3-235376**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235376.zip) | (TP to TS 38.423 and 37.340) Discussion on support of subsequent CPAC | ZTE |
| [**R3-235387**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235387.zip) | Discussion on subsequent CPAC procedures | China Telecommunication |
| [**R3-235388**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235388.zip) | (TP to BL CRs of TS 38.473) On support of subsequent CPAC procedures | China Telecommunication |
| [**R3-235621**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235621.zip) | Further discussion on LTM | NTT DOCOMO INC.. |
| [**R3-235622**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235622.zip) | Security issue on subsequent CPAC | NTT DOCOMO INC.. |
| [**R3-235642**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235642.zip) | Discussion on L1L2 based Inter-Cell Mobility | CMCC |
| [**R3-235643**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235643.zip) | (TP to TS 38.401) L1L2 based Inter-Cell Mobility | CMCC |
| [**R3-235691**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235691.zip) | [DRAFT] Reply LS to R2-2309251 = R3-235014 on Approaches during execution for inter-DU LTM (to: RAN2; cc: -; contact: Ericsson) | Ericsson |
| [**R3-235762**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235762.zip) | (BL CR to 37.340) Introduction of subsequent CPAC | ZTE, China Telecom, Huawei, China Unicom, LG Electronics, Samsung, Ericsson |
| [**R3-235763**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235763.zip) | (BL CR to 37.340) Introduction of CHO with SCG(s) | CATT |
| [**R3-235764**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235764.zip) | Summary of offline discussion MobilityEnh\_LTM | Huawei |
| [**R3-235767**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235767.zip) | Summary of offline discussion MobilityEnh\_CHO | Samsung |
| [**R3-235768**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235768.zip) | Summary of offline discussion MobilityEnh\_S-CPAC | Lenovo |
| [**R3-235827**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235827.zip) | (TP for L1L2Mob BLCR for TS 38.401): Discussion on LTM procedures | Huawei |
| [**R3-235845**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235845.zip) | (TP for BLCR TS 38.473) On Subsequent CPAC | Lenovo |
| [**R3-235851**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235851.zip) | (TP to BL CR for TS 37.340) on support of subsequent CPAC | ZTE, Ericsson, NEC |
| [**R3-235873**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235873.zip) | [TP to BL CR for TS 38.423, CHO with MRDC] Continuation of the discussions on enhancements for CHO with MR-DC | Nokia, Nokia Shanghai Bell |
| [**R3-235887**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235887.zip) | (TP to TS 38.423 BL CR) CHO with candidate SCG(s) | Ericsson |
| [**R3-235888**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235888.zip) | (TP to TS 38.423 BL CR) Subsequent CPAC | Ericsson |
| [**R3-235894**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235894.zip) | (TP for LTM BL CR to TS 38.473) F1AP impacts for LTM | Ericsson |
| [**R3-235926**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235926.zip) | (TP for L1L2Mob BLCR for TS 38.401): Discussion on LTM procedures | Huawei, Samsung |
| [**R3-235927**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235927.zip) | [TP to BL CR for TS 38.423, CHO with MRDC] Continuation of the discussions on enhancements for CHO with MR-DC | Nokia, Nokia Shanghai Bell, ZTE, Ericsson, Lenovo, Huawei, Samsung |
| [**R3-235928**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235928.zip) | (TP to TS 38.423 BL CR) CHO with candidate SCG(s) | Ericsson |
| [**R3-235929**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235929.zip) | (TP to TS 38.423 BL CR) Subsequent CPAC | Ericsson, Google, Samsung |
| [**R3-235968**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235968.zip) | (BLCR to 38.401) for L1L2Mob | Huawei, Ericsson, Nokia, Nokia Shanghai Bell, ZTE |
| [**R3-235969**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235969.zip) | (BL CR to 38.423) Introduction of CHO with SCG(s) | Lenovo, Ericsson, Huawei, Nokia, Nokia Shanghai Bell |
| [**R3-235970**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235970.zip) | (BL CR to TS 38.423) Introduction of Subsequent CPAC | Huawei, ZTE |
| [**R3-235971**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235971.zip) | (BLCR to 38.473) Additions for L1/L2 triggered mobility | Ericsson, Huawei, Nokia, Nokia Shanghai Bell, Intel Corporation, ZTE |
| [**R3-235972**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235972.zip) | (BL CR to 38.473) On Subsequent CPAC | Lenovo |
| [**R3-235973**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_121-bis/Docs/R3-235973.zip) | (BL CR to 37.340) Introduction of subsequent CPAC | ZTE, China Telecom, Huawei, China Unicom, LG Electronics, Samsung, Ericsson |

**RAN3 #122 (October 2023)**

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| [**R3-237036**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237036.zip) | (BLCR to 37.340) Introduction of CHO with SCG(s) | CATT |
| [**R3-237037**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237037.zip) | (BLCR to 38.401) for L1L2Mob | Huawei, Ericsson, Nokia, Nokia Shanghai Bell, ZTE |
| [**R3-237038**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237038.zip) | (BL CR to 38.423) Introduction of CHO with SCG(s) | Lenovo, Ericsson, Huawei, Nokia, Nokia Shanghai Bell |
| [**R3-237039**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237039.zip) | (BL CR to TS 38.423) Introduction of Subsequent CPAC | Huawei, ZTE |
| [**R3-237040**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237040.zip) | (BLCR to 38.473) Additions for L1/L2 triggered mobility | Ericsson, Huawei, Nokia, Nokia Shanghai Bell, Intel Corporation, ZTE |
| [**R3-237041**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237041.zip) | (BL CR to 38.473) On Subsequent CPAC | Lenovo |
| [**R3-237042**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237042.zip) | (BL CR to 37.340) Introduction of subsequent CPAC | ZTE, China Telecom, Huawei, China Unicom, LG Electronics, Samsung, Ericsson |
| [**R3-237139**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237139.zip) | LS on RAN2 progress on subsequent CPAC | RAN2(ZTE) |
| [**R3-237140**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237140.zip) | LS on CSI resource configuration and on early RACH for LTM | RAN2(Huawei) |
| [**R3-237147**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237147.zip) | Reply LS on beam application time for LTM | RAN4(Ericsson) |
| [**R3-237163**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237163.zip) | TP (BL CR TS 38.401) LTM RS Configuration and Signaling | Nokia, Nokia Shanghai Bell |
| [**R3-237164**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237164.zip) | TP (BL CR TS 38.473) On remaining Stage 3 issues for L1/2 Triggered Mobility (LTM) | Nokia, Nokia Shanghai Bell |
| [**R3-237168**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237168.zip) | Reply LS on security for selective SCG activation | RAN2(Nokia) |
| [**R3-237170**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237170.zip) | (TP to BLCR for TS 38.423) Left issues remaining in LTM | CATT |
| [**R3-237171**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237171.zip) | TP to BLCR for TS 38.473 on LTM | CATT |
| [**R3-237182**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237182.zip) | (TP to Mob\_enh2 BL CR TS38.401&TS38.473) Discussion on L1/L2 based Inter-cell Mobility | Samsung |
| [**R3-237185**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237185.zip) | [TPs to TS38423, TS37483 and TS37340, CHO with MRDC] Completion of the discussions on enhancements for CHO with MR-DC | Nokia, Nokia Shanghai Bell |
| [**R3-237186**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237186.zip) | [TP to BL CR to TS 38.423, S-CPAC] Complete RAN3 part of the S-CPAC solution | Nokia, Nokia Shanghai Bell |
| [**R3-237208**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237208.zip) | (TP for L1L2Mob BLCR for TS 38.401): Discussion on LTM procedures | Huawei |
| [**R3-237209**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237209.zip) | (TP for L1L2Mob BLCR for TS 38.473): LTM procedure design | Huawei |
| [**R3-237212**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237212.zip) | Remaining issues on TA management for LTM | Fujitsu |
| [**R3-237213**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237213.zip) | (TPs to CHO with SCG BL CRs of TS 37.340 and TS 38.423) support of CHO with SCGs | Huawei |
| [**R3-237214**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237214.zip) | (TP to S-CPAC TS 38.423 BL CR) support of subsequent CPAC | Huawei |
| [**R3-237234**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237234.zip) | (TP to TS38.473 on LTM) Rel-18 LTM Configuration ID, RS Configuration and other | NEC |
| [**R3-237235**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237235.zip) | (TP to TS38.401 on LTM) Updating the serving gNB-DU of other candidate Cell(s) in other candidate gNB-DU(s) | NEC |
| [**R3-237236**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237236.zip) | One or two procedures, consider general Class 2 procedure for information transfer in F1AP | NEC |
| [**R3-237237**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237237.zip) | (TP to TS 38.423 on S-CPAC) S-CPAC related handling of S-SN and Data Forwarding related | NEC |
| [**R3-237284**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237284.zip) | Further discussion on LTM | NTT DOCOMO INC.. |
| [**R3-237285**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237285.zip) | Security issue on S-CPAC | NTT DOCOMO INC.. |
| [**R3-237286**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237286.zip) | Signalling Support for LTM | Qualcomm Incorporated |
| [**R3-237287**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237287.zip) | CHO with multiple candidate SCGs | Qualcomm Incorporated |
| [**R3-237288**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237288.zip) | Subsequent CPAC in NR-DC | Qualcomm Incorporated |
| [**R3-237307**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237307.zip) | (TP for CHO with NR-DC to TS 38.423): Conditional configuration cancel | ZTE, Nokia, Nokia Shanghai Bell, LG Electronics, Huawei, Ericsson, Lenovo |
| [**R3-237308**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237308.zip) | (TP for CHO with NR-DC to TS 38.423, TS37.340): Left issue on CHO with multiple SCG | ZTE |
| [**R3-237309**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237309.zip) | (TP for CHO with NR-DC to TS 38.423, TS 37.340): Avoid Multiple Data forwarding Path | ZTE |
| [**R3-237316**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237316.zip) | (TP for LTM BL CR to TS 38.401) Solutions for LTM | Ericsson |
| [**R3-237317**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237317.zip) | (TP for LTM BL CR to TS 38.473) Solutions for LTM | Ericsson |
| [**R3-237318**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237318.zip) | (TP to TS 38.423 BL CR) CHO with candidate SCG(s) | Ericsson |
| [**R3-237319**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237319.zip) | (TP to TS 38.423 BL CR) Support of Subsequent CPAC | Ericsson |
| [**R3-237415**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237415.zip) | Discussion on L1L2 based inter-cell mobility | Lenovo |
| [**R3-237416**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237416.zip) | (TPs to BLCR for TS 38.401 & TS 38.470) Support of L1/L2 based inter-cell mobility | Lenovo |
| [**R3-237417**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237417.zip) | (TP to BLCR for TS 38.423) CHO in NR-DC | Lenovo |
| [**R3-237418**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237418.zip) | Left issues on Subsequent CPAC | Lenovo |
| [**R3-237466**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237466.zip) | (TP for L1L2Mob BLCR for TS 38.473) Reference configuration and Target Configuration ID in LTM | Google Inc. |
| [**R3-237467**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237467.zip) | (TP for L1L2Mob BLCR for TS 38.401) Resolving FFS in LTM execution | Google Inc. |
| [**R3-237468**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237468.zip) | (TP for L1L2Mob BL CR for TS 38.473) UE Context identification after successful cell switch | Google Inc. |
| [**R3-237566**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237566.zip) | Discussion on subsequent CPAC procedures | China Telecommunication |
| [**R3-237567**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237567.zip) | (TP to BL CR of TS 37.483) On support of subsequent CPAC | China Telecommunication |
| [**R3-237596**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237596.zip) | TP to BLCR for 38.423 on CHO with multiple SCGs | CATT |
| [**R3-237597**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237597.zip) | TP to BLCR for 37.483 on subsequent CPAC | CATT |
| [**R3-237620**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237620.zip) | (TP for LTM BL CR to TS 38.401/38.423/38.473) Discussion on L1L2 triggered mobility | ZTE |
| [**R3-237621**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237621.zip) | TP for LTM BL CR to TS 38.470 | ZTE, Huawei, CMCC, China Telecom, China Unicom, CATT |
| [**R3-237622**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237622.zip) | (TP to TS 38.423 and 37.340) Discussion on support of subsequent CPAC | ZTE |
| [**R3-237623**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237623.zip) | [DRAFT] Reply LS on subsequent CPAC | ZTE |
| [**R3-237642**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237642.zip) | (TP to BLCR TS38.423) Considerations on direct data forwarding | Samsung |
| [**R3-237643**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237643.zip) | (TP to BLCR TS38.423 and TS37.340) Considerations on CHO in NR-DC | Samsung |
| [**R3-237644**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237644.zip) | (TP to BLCR TS38.401 and TS38.423) Discussion on subsequent CPAC | Samsung |
| [**R3-237645**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237645.zip) | Almost complete discussions on LTM (TPs for TS 38.473 and TS 38.401) | LG Electronics Inc. |
| [**R3-237646**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237646.zip) | Complete discussions for the avoidance of multiple data forwarding paths (TP for TS 38.423) | LG Electronics Inc. |
| [**R3-237647**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237647.zip) | Almost complete discussions on CHO with SCGs (TP for TS 38.423) | LG Electronics Inc. |
| [**R3-237648**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237648.zip) | Almost complete discussions on subsequent CPAC (TP for TS 38.423) | LG Electronics Inc. |
| [**R3-237665**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237665.zip) | Discussion on remaining issues for subsequent CPAC | CMCC |
| [**R3-237675**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237675.zip) | Discussion on L1L2 based Inter-Cell Mobility | CMCC |
| [**R3-237736**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237736.zip) | Response to R3-237168 and solutions under discussion | LG Electronics Inc. |
| [**R3-237737**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237737.zip) | Reply LS on Security Solution for Selective SCG | SA3(Nokia) |
| [**R3-237813**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237813.zip) | (BL CR to 37.340) Introduction of subsequent CPAC | ZTE, China Telecom, Huawei, China Unicom, LG Electronics, Samsung, Ericsson |
| [**R3-237819**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237819.zip) | CB:#Mobility\_LTM | Huawei |
| [**R3-237822**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237822.zip) | CB:#Mobility\_CHO | Samsung |
| [**R3-237824**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237824.zip) | CB:#Mobility\_Other | Lenovo |
| [**R3-237913**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237913.zip) | Reply LS on subsequent CPAC | RAN3(ZTE) |
| [**R3-237946**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237946.zip) | (TP to BLCR TS38.423) Considerations on direct data forwarding | Samsung |
| [**R3-237949**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237949.zip) | Reply LS on subsequent CPAC | RAN3(ZTE) |
| [**R3-237954**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237954.zip) | (TP to CHO with SCG BL CR of TS 37.340) Direct Data Forwarding | Huawei |
| [**R3-237978**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237978.zip) | (TP for CHO with NR-DC to 37.340): Left issue on CHO with multiple SCG | ZTE, Huawei, Nokia, Nokia Shanghai Bell, Samsung, Ericsson, LG Electronics Inc. |
| [**R3-237980**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237980.zip) | (TP for LTM BL CR to TS 38.473) Solutions for LTM | Ericsson, Google, ZTE, CATT, NEC, Nokia, Nokia Shanghai Bell, Huawei, Samsung, LG Electronics Inc. |
| [**R3-237981**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237981.zip) | TP for LTM BL CR to TS 38.470 | ZTE, Huawei, CMCC, China Telecom, China Unicom, CATT, Nokia, Nokia Shanghai Bell, NEC, Google, LG Electronics, Ericsson |
| [**R3-237984**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237984.zip) | TP to BLCR for 37.483 on subsequent CPAC | CATT |
| [**R3-237988**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237988.zip) | (TP for BL CR for TS 38.423) CHO with SCGs | LG Electronics, Huawei |
| [**R3-237989**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237989.zip) | (TP for BL CR for TS 38.423) S-CPAC | LG Electronics, Lenovo, Nokia, Nokia Shanghai Bell |
| [**R3-237994**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-237994.zip) | [TP to BL CR to TS 37.340, S-CPAC] Complete RAN3 part of the S-CPAC solution | Nokia, Nokia Shanghai Bell, Lenovo, Ericsson |
| [**R3-238001**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238001.zip) | (BL CR to 37.340) Introduction of subsequent CPAC | ZTE, China Telecom, Huawei, China Unicom, LG Electronics, Samsung, Ericsson, Qualcomm Incorporated |
| [**R3-238005**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238005.zip) | (TP to BLCR for TS 38.423) Left issues remaining in LTM | CATT, ZTE, Nokia, Nokia Shanghai Bell, Ericsson, CMCC, LG Electronics |
| [**R3-238018**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238018.zip) | (TP for L1L2Mob BLCR for TS 38.401): LTM procedure update | Huawei |
| [**R3-238020**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238020.zip) | (TP to BLCR TS38.423) Considerations on direct data forwarding | Samsung |
| [**R3-238022**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238022.zip) | (TP to BLCR TS38.401) Subsequent CPAC | Samsung, Nokia, Nokia Shanghai Bell, ZTE, LG Electronics |
| [**R3-238047**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238047.zip) | (TP to BLCR TS38.423) Considerations on direct data forwarding | Samsung |
| [**R3-238049**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238049.zip) | (TP to BLCR TS38.423) Considerations on direct data forwarding | Samsung, Huawei, Cybercore, LG Electronics, Ericsson |
| [**R3-238050**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238050.zip) | (TP to CHO with SCG BL CR of TS 37.340) Direct Data Forwarding | Huawei, ZTE, Samsung, Ericsson, Nokia, Nokia Shanghai Bell, LG Electronics |
| [**R3-238051**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238051.zip) | (TP for BL CR for TS 38.423) CHO with SCGs | LG Electronics, Huawei, Qualcomm Incorporated, Nokia, Nokia Shanghai Bell, Samsung, ZTE, Cybercore |
| [**R3-238052**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238052.zip) | [TP to BL CR to TS 37.340, S-CPAC] Complete RAN3 part of the S-CPAC solution | Nokia, Nokia Shanghai Bell, Lenovo, ZTE, Google, Huawei, Ericsson, LG Electronics, NEC, CATT, Samsung |
| [**R3-238053**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238053.zip) | (TP for BL CR for TS 38.423) S-CPAC | LG Electronics, Lenovo, Nokia, Nokia Shanghai Bell, Ericsson, ZTE, Google, NEC, Huawei, Qualcomm Incorporated, Cybercore |
| [**R3-238054**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238054.zip) | (TP to BLCR for 37.483) on subsequent CPAC | CATT, ZTE,Huawei, NEC, LG Electronics, Ericsson, Nokia, Nokia Shanghai Bell, Samsung |
| [**R3-238059**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238059.zip) | (TP for L1L2Mob BLCR for TS 38.401): LTM procedure update | Huawei, Nokia, Nokia Shanghai Bell, NEC, Google, ZTE, Samsung, CATT, Ericsson, LG Electronics, Qualcomm Incorporated |
| [**R3-238060**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_122/Docs/R3-238060.zip) | (BLCR to 38.423) for LTM | CATT, ZTE, Nokia, Nokia Shanghai Bell, Ericsson, CMCC, LG Electronics, Huawei, NEC |
| R3-238085 | (BLCR to 37.340) Introduction of CHO with SCG(s) | CATT |
| R3-238086 | (BL CR to 37.340) Introduction of subsequent CPAC | ZTE, China Telecom, Huawei, China Unicom, LG Electronics, Samsung, Ericsson, Qualcomm Incorporated |
| R3-238087 | (BLCR to 37.483) on subsequent CPAC | CATT, ZTE,Huawei, NEC, LG Electronics, Ericsson, Nokia, Nokia Shanghai Bell, Samsung |
| R3-238088 | (BLCR to 38.401) for L1L2Mob | Huawei, Ericsson, Nokia, Nokia Shanghai Bell, ZTE |
| R3-238089 | (BL CR to 38.423) Introduction of CHO with SCG(s) | Lenovo, Ericsson, Huawei, Nokia, Nokia Shanghai Bell |
| R3-238090 | (BL CR to TS 38.423) Introduction of Subsequent CPAC | Huawei, ZTE |
| R3-238091 | (BL CR to 38.470) for LTM | CMCC, ZTE, Huawei, China Telecom, China Unicom, CATT, Nokia, Nokia Shanghai Bell, NEC, Google, LG Electronics, Ericsson |
| R3-238092 | (BL CR to TS 38.473) Solutions for LTM | Ericsson, Google, ZTE, CATT, NEC, Nokia, Nokia Shanghai Bell, Huawei, Samsung, LG Electronics Inc. |
| R3-238152 | Additions for L1/L2 triggered mobility | Ericsson, Huawei, Nokia, Nokia Shanghai Bell, Intel Corporation, ZTE |
| R3-238153 | On Subsequent CPAC | Lenovo |
| R3-238154 | Introduction of L1L2 triggered mobility | CATT, ZTE, Nokia, Nokia Shanghai Bell, Ericsson, CMCC, LG Electronics, Huawei, NEC |

**RAN4 #108bis (October 2023)**

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| [**R4-2315110**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315110.zip) | Discussion on general aspects and scenarios for L1/L2 based inter-cell mobility | CATT |
| [**R4-2315111**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315111.zip) | Discussion on L1-RSRP measurement requirements for L1/L2 based inter-cell mobility | CATT |
| [**R4-2315112**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315112.zip) | Discussion on L1/L2 inter-cell mobility delay requirements | CATT |
| [**R4-2315113**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315113.zip) | Draft CR on measurement restrictions for SSB and CSI-RS based beam failure detection for LTM requirements | CATT |
| [**R4-2315114**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315114.zip) | Reply LS on beam application time for LTM | CATT |
| [**R4-2315115**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315115.zip) | Discussion on improvement on SCell/SCG setup delay | CATT |
| [**R4-2315116**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315116.zip) | Discussion on enhanced CHO configurations | CATT |
| [**R4-2315141**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315141.zip) | Discussion on improvement on SCell/SCG setup delay | LG Electronics Inc. |
| [**R4-2315316**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315316.zip) | Discussion on L1/L2 inter-cell mobility delay requirements | CMCC |
| [**R4-2315317**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315317.zip) | Discussion on general aspects for L1/L2 based inter-cell mobility | CMCC |
| [**R4-2315318**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315318.zip) | Discussion on L1-RSRP measurement requirements for L1/L2 based inter-cell mobility | CMCC |
| [**R4-2315319**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315319.zip) | Discussion on performance requirements for mobility enhancement | CMCC |
| [**R4-2315320**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315320.zip) | Discussion on improvement on SCell/SCG setup delay | CMCC |
| [**R4-2315321**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315321.zip) | Discussion on enhanced CHO | CMCC |
| [**R4-2315322**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315322.zip) | DraftCR on inter-f L1-RSRP measurement without gap | CMCC |
| [**R4-2315402**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315402.zip) | Discussion on general aspects and scenarios for LTM | Xiaomi |
| [**R4-2315403**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315403.zip) | Discussion on L1-RSRP measurement requirements | Xiaomi |
| [**R4-2315404**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315404.zip) | CR on CSSF for Inter-frequency L1-RSRP measurement within gap | Xiaomi |
| [**R4-2315405**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315405.zip) | Impact on CSSF of L3 measurement within gaps | Xiaomi |
| [**R4-2315572**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315572.zip) | draftCR on measurement restrictions for SSB and CSI-RS based candidate beam detection for LTM requirements | ZTE Corporation |
| [**R4-2315573**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315573.zip) | Discussion on general aspects and scenarios of L1/L2 triggered inter-cell mobility | ZTE Corporation |
| [**R4-2315574**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315574.zip) | Discussion on L1-RSRP measurement requirements | ZTE Corporation |
| [**R4-2315575**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315575.zip) | Discussion on L1/L2 inter-cell mobility delay requirements | ZTE Corporation |
| [**R4-2315576**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315576.zip) | Discussion on the improvement on SCell/SCG setup delay | ZTE Corporation |
| [**R4-2315577**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315577.zip) | Discussion on Enhanced CHO configurations | ZTE Corporation |
| [**R4-2315654**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315654.zip) | Discussion on SFN and PDCCH-order based RACHfor L1/L2-based inter-cell mobility | Huawei, HiSilicon |
| [**R4-2315655**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315655.zip) | Discussion on L1-RSRP measurement requirements | Huawei, HiSilicon |
| [**R4-2315656**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315656.zip) | CR on measurement restriction for RLM due to intra-f L1-RSRP measurement on neighbor cell and Inter-f L1-RSRP measurement without gap | Huawei, HiSilicon |
| [**R4-2315657**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315657.zip) | Discussion on L1/L2 inter-cell mobility delay requirements | Huawei, HiSilicon |
| [**R4-2315658**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315658.zip) | Discussion on beam application for L1/L2-based inter-cell mobility | Huawei, HiSilicon |
| [**R4-2315659**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315659.zip) | Discussion on improvement on FR2 SCell/SCG setup/resume | Huawei, HiSilicon |
| [**R4-2315660**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315660.zip) | Discussion on Enhanced CHO configurations | Huawei, HiSilicon |
| [**R4-2315661**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315661.zip) | Correction on conditional handover including target MCG in FR1 and target SCG in FR2 in NR-DC | Huawei, HiSilicon |
| [**R4-2315662**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315662.zip) | Discussion on performance requirements for mobility enhancements | Huawei, HiSilicon |
| [**R4-2315731**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315731.zip) | Discussion on Enhanced CHO configurations | vivo |
| [**R4-2315732**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315732.zip) | Discussion on RRM requirements of FR2 measurements for DC/CA setup/resume | vivo |
| [**R4-2315737**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315737.zip) | Discussion on test cases for R18 NR Mobility Enhancements | vivo |
| [**R4-2315738**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315738.zip) | draft CR on Conditional handover including target MCG and candidate SCG for CPC for FR1-FR1 in NR-DC | vivo |
| [**R4-2315763**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315763.zip) | Reply LS on impact/interruption for PDCCH-order based PRACH | CATT |
| [**R4-2315928**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315928.zip) | Discussion on LTM general aspects | Nokia, Nokia Shanghai Bell |
| [**R4-2315929**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315929.zip) | Discussion on LTM cell switch delay requirements | Nokia, Nokia Shanghai Bell |
| [**R4-2315930**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315930.zip) | DraftCR for LTM cell switch delay requirements | Nokia, Nokia Shanghai Bell |
| [**R4-2315931**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315931.zip) | Discussion on CHO enhancements | Nokia, Nokia Shanghai Bell |
| [**R4-2315932**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2315932.zip) | Discussion on RRM performance requirements for further mobility enhancements | Nokia, Nokia Shanghai Bell |
| [**R4-2316176**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316176.zip) | On general and scenarios of LTM | OPPO |
| [**R4-2316177**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316177.zip) | On L1-RSRP measurement of LTM | OPPO |
| [**R4-2316178**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316178.zip) | Draft CR for measurement restriction on BFD and CBD due to LTM L1-RSRP measurement | OPPO |
| [**R4-2316179**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316179.zip) | On L1L2 inter-cell mobility delay requirements | OPPO |
| [**R4-2316180**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316180.zip) | On improvement on FR2 SCellSCG setupresume | OPPO |
| [**R4-2316287**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316287.zip) | Discussion on general aspects in R18 LTM | vivo |
| [**R4-2316288**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316288.zip) | Discussion on L1 measurements in R18 LTM | vivo |
| [**R4-2316289**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316289.zip) | Discussion on cell switch delay requirements in R18 LTM | vivo |
| [**R4-2316290**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316290.zip) | draftCR on UL transmit timing requirements for R18 LTM | vivo |
| [**R4-2316291**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316291.zip) | draftCR on RRM requirements for TCI activation before cell switch in R18 LTM | vivo |
| [**R4-2316404**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316404.zip) | Discussion on NR-DC with selective activaiton | Ericsson |
| [**R4-2316405**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316405.zip) | Discussion on improvement on Scell/SCG setup delay | Ericsson |
| [**R4-2316406**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316406.zip) | Discussion on enhanced CHO configurations | Ericsson |
| [**R4-2316407**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316407.zip) | Draft CR to TS 38.133 for CHO+CPC | Ericsson |
| [**R4-2316408**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316408.zip) | Discussion on test cases for mobility enhancement work item part 2 | Ericsson |
| [**R4-2316557**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316557.zip) | Discussion on general aspects and scenarios of L1/L2 based inter-cell mobility | Apple |
| [**R4-2316558**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316558.zip) | Draft CR for requirements of inter-f L1-RSRP measurement with MG | Apple |
| [**R4-2316559**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316559.zip) | Discussion on L1-RSRP measurement requirements of L1/L2 based inter-cell mobility | Apple |
| [**R4-2316560**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316560.zip) | Discussion on L1/L2 based inter-cell mobility delay requirements | Apple |
| [**R4-2316561**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316561.zip) | Discussion on improvement on FR2 SCell/SCG setup delay | Apple |
| [**R4-2316562**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316562.zip) | Discussion on Enhanced CHO configurations | Apple |
| [**R4-2316563**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316563.zip) | Draft CR on Enhanced CHO configurations | Apple |
| [**R4-2316564**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316564.zip) | Discussion on RRM performance requirements of part 2 | Apple |
| [**R4-2316609**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316609.zip) | draftCR for 38.133 on LTM L3 measurements in L1 measurement report | Nokia, Nokia Shanghai Bell |
| [**R4-2316610**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316610.zip) | Discussion on LTM L3 measurements in L1 report | Nokia, Nokia Shanghai Bell |
| [**R4-2316611**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316611.zip) | Discussion on LTM Measurements | Nokia, Nokia Shanghai Bell |
| [**R4-2316612**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316612.zip) | Discussion on Improvement on SCell/SCG setup delay | Nokia, Nokia Shanghai Bell |
| [**R4-2316613**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316613.zip) | draftCR for 38.133 on Improvement on SCell/SCG setup delay | Nokia, Nokia Shanghai Bell |
| [**R4-2316651**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316651.zip) | Discussion on general aspects and scenarios of LTM | MediaTek Inc. |
| [**R4-2316652**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316652.zip) | Discussion on L1-RSRP measurement requirements for LTM | MediaTek Inc. |
| [**R4-2316653**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316653.zip) | Discussion on LTM delay requirements | MediaTek Inc. |
| [**R4-2316654**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316654.zip) | Discussion on improvement on SCell/SCG setup/resume | MediaTek Inc. |
| [**R4-2316668**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316668.zip) | Draft CR for intra-frequency L1-RSRP measurement on 38.133 R18 LTM | MediaTek Inc, Ericsson |
| [**R4-2316669**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316669.zip) | Draft CR for impact on measurement restriction of L1-SINR due to LTM on 38.133 | MediaTek Inc. |
| [**R4-2316713**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316713.zip) | Discussion on improvement on Scell/SCG setup delay | Qualcomm Incorporated |
| [**R4-2316714**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316714.zip) | Draft CR for CHO with Pscell FR1+FR1 to FR1+FR2 | Qualcomm Incorporated |
| [**R4-2316715**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316715.zip) | Discussion on scope of performance requirement for Moblity part2 | Qualcomm Incorporated |
| [**R4-2316823**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316823.zip) | On LTM general aspects and scenarios | Ericsson |
| [**R4-2316824**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316824.zip) | On L1-RSRP measurement requirements | Ericsson |
| [**R4-2316825**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316825.zip) | On LTM delay requirements | Ericsson |
| [**R4-2316826**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316826.zip) | On other aspects of LTM | Ericsson |
| [**R4-2316878**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316878.zip) | L1-RSRP measurement requirements | Qualcomm Incorporated |
| [**R4-2316879**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316879.zip) | LTM cell switch execution requirements | Qualcomm Incorporated |
| [**R4-2316880**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316880.zip) | Delay and Interruption upon LTM PDCCH order based PRACH | Qualcomm Incorporated |
| [**R4-2316892**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2316892.zip) | Reply LS on beam application time and UE based TA measurement for LTM | Ericsson |
| [**R4-2317211**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317211.zip) | Topic summary for [108-bis][219] NR\_Mob\_enh2\_part1 | Moderator (MediaTek) |
| [**R4-2317212**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317212.zip) | Topic summary for [108-bis][220] NR\_Mob\_enh2\_part2 | Moderator (Apple) |
| [**R4-2317272**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317272.zip) | Ad-hoc minutes for NR\_Mob\_enh2\_part1 | Apple |
| [**R4-2317273**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317273.zip) | Ad-hoc minutes for NR\_Mob\_enh2\_part2 | Intel |
| [**R4-2317314**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317314.zip) | Draft CR on measurement restrictions for SSB and CSI-RS based beam failure detection for LTM requirements | CATT |
| [**R4-2317315**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317315.zip) | draftCR on measurement restrictions for SSB and CSI-RS based candidate beam detection for LTM requirements | ZTE Corporation |
| [**R4-2317316**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317316.zip) | Draft CR for intra-frequency L1-RSRP measurement on 38.133 R18 LTM | MediaTek Inc, Ericsson |
| [**R4-2317317**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317317.zip) | Draft CR for impact on measurement restriction of L1-SINR due to LTM on 38.133 | MediaTek Inc. |
| R4-2317318 | DraftCR on inter-f L1-RSRP measurement without gap | CMCC |
| [**R4-2317319**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317319.zip) | CR on CSSF for Inter-frequency L1-RSRP measurement within gap | Xiaomi |
| [**R4-2317320**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317320.zip) | CR on measurement restriction for RLM due to intra-f L1-RSRP measurement on neighbor cell and Inter-f L1-RSRP measurement without gap | Huawei, HiSilicon |
| [**R4-2317321**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317321.zip) | Draft CR for measurement restriction on BFD and CBD due to LTM L1-RSRP measurement | OPPO |
| [**R4-2317322**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317322.zip) | Draft CR for requirements of inter-f L1-RSRP measurement with MG | Apple |
| [**R4-2317323**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317323.zip) | DraftCR for LTM cell switch delay requirements | Nokia, Nokia Shanghai Bell |
| [**R4-2317324**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317324.zip) | draftCR on UL transmit timing requirements for R18 LTM | vivo |
| [**R4-2317325**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317325.zip) | draftCR on RRM requirements for TCI activation before cell switch in R18 LTM | vivo |
| [**R4-2317326**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317326.zip) | draftCR for 38.133 on LTM L3 measurements in L1 measurement report | Nokia, Nokia Shanghai Bell |
| [**R4-2317328**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317328.zip) | WF on R18 Further NR mobility enhancement – Improvement on SCell/SCG setup delay and Enhanced CHO | Apple |
| [**R4-2317329**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317329.zip) | WF on RRM performance requirements of R18 Further NR mobility enhancement | Apple |
| [**R4-2317330**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317330.zip) | WF on NR mobility enhancements (part 1) | MediaTek |
| [**R4-2317331**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317331.zip) | Reply LS on beam application time for LTM | Ericsson |
| [**R4-2317357**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317357.zip) | Draft CR to TS 38.133 for CHO+CPC | Ericsson |
| [**R4-2317358**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317358.zip) | Draft CR on Enhanced CHO configurations | Apple |
| [**R4-2317359**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317359.zip) | LS on Improvement of SCell/SCG setup delay | Nokia |
| [**R4-2317404**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317404.zip) | Draft CR to TS 38.133 for CHO+CPC | Ericsson |
| [**R4-2317423**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317423.zip) | Impact on CSSF of L3 measurement within gaps | Xiaomi |
| [**R4-2317424**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317424.zip) | Draft CR for requirements of inter-f L1-RSRP measurement with MG | Apple |
| [**R4-2317428**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_108bis/Docs/R4-2317428.zip) | LS on improvement on FR2 SCell/SCG setup delay | Nokia |

**RAN4#109 (November 2023)**

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| [**R4-2318179**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318179.zip) | Topic summary for [109][223] NR\_Mob\_enh2\_part1 | Moderator (MediaTek) |
| R4-2318180 | Topic summary for [109][224] NR\_Mob\_enh2\_part2 | Moderator (Apple) |
| [**R4-2318320**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318320.zip) | Draft CR on measurement restrictions for SSB and CSI-RS based BFD for LTM | CATT |
| [**R4-2318321**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318321.zip) | Discussion on PDCCH-order RACH on neighbor cell for L1L2 based inter-cell mobility | CATT |
| [**R4-2318322**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318322.zip) | Discussion on L1-RSRP measurement requirements for L1/L2 based inter-cell mobility | CATT |
| [**R4-2318323**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318323.zip) | Discussion on cell switch delay requirements for LTM | CATT |
| [**R4-2318324**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318324.zip) | Draft Reply LS on PDCCH order RACH on neighbour cell | CATT |
| [**R4-2318325**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318325.zip) | Draft Reply LS on beam application time for LTM | CATT |
| [**R4-2318326**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318326.zip) | Draft Reply LS on SMTC of LTM candidate cells for L1 measurements | CATT |
| [**R4-2318327**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318327.zip) | Discussion on improvement on SCell/SCG setup delay | CATT |
| [**R4-2318328**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318328.zip) | Discussion on RRM performance requirements for R18 further NR mobility | CATT |
| [**R4-2318599**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318599.zip) | Discussion on general aspects and scenarios of L1/L2 based inter-cell mobility | Apple |
| [**R4-2318600**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318600.zip) | Draft CR for requirements of inter-f L1-RSRP measurement with MG | Apple |
| [**R4-2318601**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318601.zip) | Discussion on L1-RSRP measurement requirements of L1/L2 based inter-cell mobility | Apple |
| [**R4-2318602**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318602.zip) | Discussion on L1/L2 based inter-cell mobility delay requirements | Apple |
| [**R4-2318603**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318603.zip) | Discussion on RAN2 LS on L1 measurements for LTM | Apple |
| [**R4-2318604**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318604.zip) | Reply LS on L1 measurements for LTM | Apple |
| [**R4-2318605**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318605.zip) | Discussion on improvement on FR2 SCell/SCG setup delay | Apple |
| [**R4-2318606**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318606.zip) | Draft CR on FR2 SCell/SCG setup delay improvement | Apple |
| [**R4-2318607**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318607.zip) | LS on FR2 SCell/SCG setup delay improvement | Apple |
| [**R4-2318608**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318608.zip) | Draft CR on Enhanced CHO configurations | Apple |
| [**R4-2318609**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318609.zip) | Discussion on RRM performance requirements of part 2 | Apple |
| [**R4-2318842**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318842.zip) | Discussion on L1-RSRP measurement requirements for LTM | Xiaomi |
| [**R4-2318843**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318843.zip) | DraftCR on CSSF for Inter-frequency L1-RSRP measurement within gap | Xiaomi |
| [**R4-2318844**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2318844.zip) | DraftCR on the Impact of CSSF for L3 measurement within gaps | Xiaomi |
| [**R4-2319051**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319051.zip) | Discussion on general aspects in R18 LTM | vivo |
| [**R4-2319052**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319052.zip) | Discussion on L1 measurements in R18 LTM | vivo |
| [**R4-2319053**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319053.zip) | Discussion on cell switch delay requirements in R18 LTM | vivo |
| [**R4-2319054**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319054.zip) | draftCR on UL transmit timing requirements for R18 LTM | vivo |
| [**R4-2319055**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319055.zip) | draftCR on RRM requirements for TCI activation before cell switch in R18 LTM | vivo |
| [**R4-2319059**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319059.zip) | Discussion on Enhanced CHO configurations | vivo |
| [**R4-2319060**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319060.zip) | Discussion on RRM requirements of FR2 measurements for DC/CA setup/resume | vivo |
| [**R4-2319065**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319065.zip) | Discussion on test cases for R18 NR Mobility Enhancements | vivo |
| [**R4-2319078**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319078.zip) | Discussion on L1/L2 inter-cell mobility delay requirements | CMCC |
| [**R4-2319079**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319079.zip) | Discussion on general aspects for L1/L2 based inter-cell mobility | CMCC |
| [**R4-2319080**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319080.zip) | Discussion on L1-RSRP measurement requirements for L1/L2 based inter-cell mobility | CMCC |
| [**R4-2319081**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319081.zip) | Discussion on LS on LTM | CMCC |
| [**R4-2319082**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319082.zip) | Discussion on performance requirements for mobility enhancement | CMCC |
| [**R4-2319083**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319083.zip) | Discussion on improvement on SCell/SCG setup delay | CMCC |
| [**R4-2319084**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319084.zip) | DraftCR on inter-f L1-RSRP measurement without gap | CMCC |
| [**R4-2319281**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319281.zip) | On general aspects of LTM | Nokia, Nokia Shanghai Bell |
| [**R4-2319282**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319282.zip) | Draft CR on LTM candidate cell TCI state activation delay | Nokia, Nokia Shanghai Bell |
| [**R4-2319283**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319283.zip) | On LTM cell switch delay | Nokia, Nokia Shanghai Bell |
| [**R4-2319284**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319284.zip) | Draft CR on LTM cell switch delay requirements | Nokia, Nokia Shanghai Bell |
| [**R4-2319285**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319285.zip) | On remaining details of CHO with CPC | Nokia, Nokia Shanghai Bell |
| [**R4-2319286**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319286.zip) | Draft CR on CHO with CPC requirements | Nokia, Nokia Shanghai Bell |
| [**R4-2319287**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319287.zip) | On performance part of further mobility enhancements | Nokia, Nokia Shanghai Bell |
| [**R4-2319298**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319298.zip) | Discussion on general aspects and scenarios of L1/L2 triggered inter-cell mobility | ZTE Corporation |
| [**R4-2319299**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319299.zip) | Discussion on L1-RSRP measurement requirements | ZTE Corporation |
| [**R4-2319300**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319300.zip) | draftCR on measurement restrictions for SSB and CSI-RS based candidate beam detection for LTM requirements | ZTE Corporation |
| [**R4-2319301**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319301.zip) | Discussion on L1/L2 inter-cell mobility delay requirements | ZTE Corporation |
| [**R4-2319302**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319302.zip) | Discussion on using L3 measurement in L1 report | ZTE Corporation |
| [**R4-2319303**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319303.zip) | Discussion on the improvement on SCell/SCG setup delay | ZTE Corporation |
| [**R4-2319304**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319304.zip) | Discussion on Enhanced CHO configurations | ZTE Corporation |
| [**R4-2319305**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319305.zip) | Discussion on performance requirements for mobility enhancements | ZTE Corporation |
| [**R4-2319324**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319324.zip) | Discussion on improvement on SCell/SCG setup delay | LG Electronics Inc. |
| [**R4-2319368**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319368.zip) | Discussion on general requirements for L1/L2-based inter-cell mobility | Huawei, HiSilicon |
| [**R4-2319369**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319369.zip) | Discussion on L1-RSRP measurement requirements | Huawei, HiSilicon |
| [**R4-2319370**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319370.zip) | CR on measurement restriction for RLM due to intra-f L1-RSRP measurement on neighbor cell and Inter-f L1-RSRP measurement without gap | Huawei, HiSilicon |
| [**R4-2319371**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319371.zip) | Discussion on L1/L2 inter-cell mobility delay requirements | Huawei, HiSilicon |
| [**R4-2319372**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319372.zip) | Reply LS on L1 measurements for LTM | Huawei, HiSilicon |
| [**R4-2319373**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319373.zip) | Discussion on improvement on FR2 SCell/SCG setup/resume | Huawei, HiSilicon |
| [**R4-2319374**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319374.zip) | Discussion on Enhanced CHO configurations | Huawei, HiSilicon |
| [**R4-2319375**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319375.zip) | Discussion on performance requirements for mobility enhancements | Huawei, HiSilicon |
| [**R4-2319486**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319486.zip) | On general and scenarios of LTM | OPPO |
| [**R4-2319487**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319487.zip) | Draft CR for measurement restriction on BFD and CBD due to LTM L1-RSRP measurement | OPPO |
| [**R4-2319488**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319488.zip) | On improvement on FR2 SCellSCG setupresume | OPPO |
| [**R4-2319624**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319624.zip) | Discussion on general aspects and scenarios of LTM | MediaTek Inc. |
| [**R4-2319625**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319625.zip) | Discussion on L1-RSRP measurement requirements for LTM | MediaTek Inc. |
| [**R4-2319626**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319626.zip) | Discussion on LTM delay requirements | MediaTek Inc. |
| [**R4-2319627**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319627.zip) | Draft CR for intra-frequency L1-RSRP measurement on 38.133 R18 LTM | MediaTek Inc., Ericsson |
| [**R4-2319628**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319628.zip) | Draft CR for R18 LTM on 38.133 | MediaTek Inc. |
| [**R4-2319629**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319629.zip) | Discussion on UE feature list for R18 LTM | MediaTek Inc. |
| [**R4-2319630**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319630.zip) | Discussion on RRM performance requirements for mobility enhancement | MediaTek Inc. |
| [**R4-2319631**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319631.zip) | Discussion on improvement on SCell/SCG setup/resume | MediaTek Inc. |
| [**R4-2319789**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319789.zip) | Discussion on LTM Measurements | Nokia, Nokia Shanghai Bell |
| [**R4-2319790**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319790.zip) | draftCR for 38.133 on LTM L3 measurements in L1 measurement report | Nokia, Nokia Shanghai Bell |
| [**R4-2319791**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319791.zip) | Discussion on LTM L3 measurements in L1 report | Nokia, Nokia Shanghai Bell |
| [**R4-2319792**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319792.zip) | Discussion on NR-DC with selective activation of cell groups via L3 enhancements | Nokia, Nokia Shanghai Bell |
| [**R4-2319793**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319793.zip) | draftCR on NR-DC with selective activation of cell groups via L3 enhancements | Nokia, Nokia Shanghai Bell |
| [**R4-2319794**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319794.zip) | Discussion on Improvement on SCell/SCG setup delay | Nokia, Nokia Shanghai Bell |
| [**R4-2319795**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2319795.zip) | draftCR for 38.133 on Improvement on SCell/SCG setup delay | Nokia, Nokia Shanghai Bell |
| [**R4-2320491**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320491.zip) | Discussion on remaining issues Improvement on SCell/SCG setup delay | Qualcomm Incorporated |
| [**R4-2320621**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320621.zip) | Discussion on improvement for scg\_scell setup delay | Ericsson |
| [**R4-2320622**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320622.zip) | Disucssion on mobility performance part | Ericsson |
| [**R4-2320623**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320623.zip) | Draft CR to 38.133 for improvement for scg\_scell setup dealy enhancement | Ericsson |
| [**R4-2320773**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320773.zip) | On LTM general aspects and scenarios | Ericsson |
| [**R4-2320774**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320774.zip) | On L1-RSRP measurement requirements | Ericsson |
| [**R4-2320775**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320775.zip) | On LTM delay requirements | Ericsson |
| [**R4-2320776**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320776.zip) | On other aspects of LTM | Ericsson |
| R4-2320777 | Intra-frequency measurments for LTM | Ericsson |
| [**R4-2320778**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320778.zip) | Reply LS to RAN2 on L1 measurements for LTM | Ericsson |
| [**R4-2320960**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320960.zip) | L1-RSRP measurement requirements | Qualcomm Incorporated |
| [**R4-2320961**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320961.zip) | LTM cell switch execution requirements | Qualcomm Incorporated |
| [**R4-2320962**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2320962.zip) | Early DL and UL synchronizations | Qualcomm Incorporated |
| [**R4-2321326**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321326.zip) | Ad-hoc minutes #1 on NR\_Mob\_enh2 (Part 2) | Apple |
| [**R4-2321331**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321331.zip) | Ad-hoc minutes #2 on NR\_Mob\_enh2 | Apple |
| [**R4-2321343**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321343.zip) | LS on FR2 SCell/SCG setup delay improvement | Apple |
| [**R4-2321346**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321346.zip) | LS on FR2 SCell/SCG setup delay improvement | Apple |
| [**R4-2321347**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321347.zip) | LS on FR2 SCell/SCG setup delay improvement | Apple |
| [**R4-2321373**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321373.zip) | Draft CR for intra-frequency L1-RSRP measurement on 38.133 R18 LTM | MediaTek Inc., Ericsson |
| [**R4-2321374**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321374.zip) | Draft CR for R18 LTM on 38.133 | MediaTek Inc. |
| [**R4-2321376**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321376.zip) | Draft CR for requirements of inter-f L1-RSRP measurement with MG | Apple |
| [**R4-2321377**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321377.zip) | DraftCR on CSSF for Inter-frequency L1-RSRP measurement within gap | Xiaomi |
| [**R4-2321378**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321378.zip) | DraftCR on the Impact of CSSF for L3 measurement within gaps | Xiaomi |
| [**R4-2321379**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321379.zip) | DraftCR on inter-f L1-RSRP measurement without gap | CMCC |
| [**R4-2321381**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321381.zip) | CR on measurement restriction for RLM due to intra-f L1-RSRP measurement on neighbor cell and Inter-f L1-RSRP measurement without gap | Huawei, HiSilicon |
| [**R4-2321383**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321383.zip) | Draft CR on LTM cell switch delay requirements | Nokia, Nokia Shanghai Bell |
| [**R4-2321384**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321384.zip) | draftCR on UL transmit timing requirements for R18 LTM | vivo |
| [**R4-2321387**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321387.zip) | WF on NR mobility enhancements (part 1) | MediaTek |
| [**R4-2321388**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321388.zip) | Reply LS to RAN2 on L1 measurements for LTM | Ericsson |
| [**R4-2321389**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321389.zip) | LS on n-TimingAdvanceOffset for PDCCH order RACH | Huawei |
| [**R4-2321395**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321395.zip) | draftCR for 38.133 on Improvement on SCell/SCG setup delay | Nokia, Nokia Shanghai Bell |
| [**R4-2321396**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321396.zip) | Draft CR to 38.133 for improvement for scg\_scell setup dealy enhancement | Ericsson |
| [**R4-2321397**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321397.zip) | Draft CR on CHO with CPC requirements | Nokia, Nokia Shanghai Bell |
| [**R4-2321398**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321398.zip) | WF on R18 Further NR mobility enhancement – part 2 | Apple |
| [**R4-2321399**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321399.zip) | WF on R18 Further NR mobility enhancement – RRM performance requirements | Apple |
| [**R4-2321512**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321512.zip) | Reply LS on PDCCH order RACH on neighbour cell | CATT |
| [**R4-2321600**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321600.zip) | WF on NR mobility enhancements (part 1) | MediaTek |
| [**R4-2321611**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321611.zip) | draftCR on UL transmit timing requirements for R18 LTM | vivo |
| [**R4-2321612**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321612.zip) | LS on Scell setup delay improvement | Nokia |
| [**R4-2321621**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321621.zip) | WF on NR mobility enhancements (part 1) | MediaTek |
| [**R4-2321622**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321622.zip) | Reply LS on PDCCH order RACH on neighbour cell | CATT |
| [**R4-2321623**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321623.zip) | LS on Scell setup delay improvement | Nokia |
| R4-2321631 | LS on Scell setup delay improvement | Nokia |
| [**R4-2321635**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_109/Docs/R4-2321635.zip) | draftCR for 38.133 on Improvement on SCell/SCG setup delay | Nokia, Nokia Shanghai Bell |
| R4-2321641 | Big CR to TS 38.133 on Further NR mobility enhancements | MediaTek, Apple |

10.01.2022 minor adaptations for RAN #95e

04.10.2021 minor adaptations for RAN #94e

08.08.2021 minor adaptations for RAN #93e

17.05.2021 minor adaptations for RAN #92e

28.01.2021 minor adaptations for RAN #91e

09.11.2020 minor adaptations for RAN #90e

31.08.2020 minor adaptations for RAN #89e

20.04.2020 minor adaptations for RAN #88e

18.02.2020 minor adaptations for RAN #87e

14.11.2019 minor adaptations for RAN #86

18.08.2019 minor adaptations for RAN #85

12.05.2019 minor adaptations for RAN #84

27.02.2019 minor adaptations for RAN #83

21.11.2018 completion levels with colours added (for RAN #82)

v04.81 31.07.2018 simplification of template and addition of cross-TSG aspects (for RAN #81)

v04.80 21.05.2018 minor adaptations for RAN #80

v04.79 26.02.2018 minor adaptations for RAN #79

v04.78 18.11.2017 minor adaptations for RAN #78

v04.77 06.08.2017 minor adaptations for RAN #77

v04.76 15.05.2017 minor adaptations for RAN #76

v04.75 31.01.2017 minor adaptations for RAN #75

v04.74 28.10.2016 minor adaptations for RAN #74

v04.73 01.09.2016 adaptations for RAN #73 (time units in extra Excel table, RAN6 reporting included)

v04.72 26.05.2016 adaptations for RAN #72 (introduction of NR & GERAN TUs)

v04.71 10.02.2016 minor adaptations for RAN #71

v04.70 30.10.2015 minor adaptations for RAN #70

v04.69 12.08.2015 minor adaptations for RAN #69

v04.68 21.05.2015 minor adaptations for RAN #68

v04.67 01.02.2015 minor adaptations for RAN #67

v04.66 16.11.2014 minor adaptations for RAN #66

v04.65 16.08.2014 minor adaptations for RAN #65

v04.64 22.05.2014 minor adaptations for RAN #64

v04.63 24.01.2014 restructuring for RAN #63 to cover Core & Perf. in one doc file

v03.62 11.11.2013 section 1.2.3 adapted for RAN #62

v03 11.08.2013 section 1.2.3 added on time budget

v02 07.05.2010 history added, some spelling corrections

v01 13.11.2009 First version of the template